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ORIGINAL ARTICLES.

HYDROPHOBIA.

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Our first reliable account of rabies was by Aristotle, 322 years before Christ. He thought all animals except man were liable to the disease by inoculation of one from another. Virgil, Horace, Plutarch, and others, 130 years before Christ, gave interesting accounts of the disease; and in the second century after Christ, Galen spoke of it as the worst of diseases and recommended as a preventive excision of the wound. From the time of Galen to that of Rhazes, A. D. 922, but little was written concerning it. In the present century the writers have been numerous, as nearly all who publish works on the Practice of Medicine treat of it, but merely speak of it as it has been regarded by writers of an earlier period.

In the writings of two hundred years ago we find the disease was as accurately described as it is in those of our own times. All of them alike speak of the cause of rabies, the symptoms, the invariably fatal ending, and the means of prevention—by getting the virus from the wound or destroying it there.

Since I was appointed to report on this subject, I have carefully gone over seventy-eight long columns in the Encyclopedia of 1797; the one hundred and one pages of the Transactions of the American Medical Association, embracing 106 cases of rabies reported by the Committee of that Association in 1856; the interesting account of it contained in *Erichsen's Science and Art of Surgery*; and last, the more recent and exhaustive history of the

disease given by Ziemssen in his *Cyclopedia of the Practice of Medicine*, where forty-two pages are given to the disease as it is manifested in dogs and other domestic animals, and forty pages as it is exhibited in human beings. As Ziemssen has embraced in his article all that was known up to his time, 1875, and in which he differs scarcely at all from all former writers, his declarations may be considered as reliable information as is attainable. To make copious extracts even from this voluminous report, which embraces all that is known on the subject, is unnecessary, and I shall briefly summarize it.

The cause of the disease in man is generally from the bite of a rabid dog, or the application of the saliva to an abraded surface or an incision through the skin. It *never* occurs spontaneously even in dogs.

The experiments of Herbing conclusively show that the saliva of a rabid dog is inactive when brought in contact with the healthy and unabraded mucous membrane of the mouth and alimentary canal. Pasteur and his disciples say exactly the same. In the time of Aristotle it was considered the most fearful of maladies and that by merely coming in contact with the body, or by treading upon the saliva of one affected by rabies, the disease might be contracted.

Even now there are districts in Europe, namely, the military frontier of Austria where the disease is frequent, in which the dread of it is so great, say historians, that human beings who suffer from it are shot

by their neighbors or not infrequently commit suicide. Even in my boyhood it was understood by us that if a person had hydrophobia he must either be bled to death, or smothered under feather beds. And only three or four years ago the newspapers reported a case of rabies, near to or in Atlanta, which could not be kept under the bed by four men, who were on it, but when they got two more on they succeeded in controlling him—whether by smothering or not, they did not state. How I suffered night and day when young Charles Rossith, one of my school-mates and a boy of my own age, was said to have hydrophobia and I supposed would be smothered under feather beds, I shall never forget. The young boys about the neighborhood gathered in groups agonized by what the poor lad was to undergo.

SYMPTOMS IN DOGS.—Ziemssen says that the symptoms described 200 years ago, were given as reddened eyes, drooping tail, projecting tongue and foaming mouth. These will do for the present time as well. But two or three pages are filled with an account of the many phenomena shown by different cases in the prodromic stage.

Two forms of rabies have long been recognized. The authors of long ago described them as the *Violent Form* and the *Sullen Form*. Pasteur's two forms he names: the *Furious* form and the *Paralytic* form.

The *Furious* in which there is delirium and disposition to bite. The *Paralytic* in which the animal is mute and paralyzed. In the *Furious* form the maniacal spells appear only spasmodically, while in the intervals, the spasms are present only to a slight degree. The *Furious* attacks may last several hours. *No special dread of water exists.* In very rare instances do animals suffer from spasms of the throat in attempts to drink water. A discharge of foam from the mouth is scarcely ever seen. Saliva is emitted only when there is inability to swallow. When death is near, the pulse is small and thread-like, the breathing labored and the pupils dilated. At times partial convulsions set in. Death on 5th or 6th day; rarely later than 7th or 8th; never prolonged beyond the 10th; invariably fatal.

The *Sullen* or mute form constitutes only about 15 or 20 per cent; it runs a shorter course; the victims are less active; are silent and depressed; not disposed to

leave home—which in the furious form the dog is disposed to do—or gnaw or bite. Paralysis of the lower jaw supervenes, with difficulty in swallowing, almost everything taken into the mouth falls out, and frothing appears. There is a changed voice, loss of appetite, constipation, rapid emaciation, paralysis of hind parts and fatal termination more quickly than in the furious form, namely, within two or three days.

In other domestic animals there are the same symptoms as in dogs. *In none of them is there dread of water.* They lap it eagerly so long as there is no difficulty in swallowing.

There are few authors who regard this affection as having been properly named hydrophobia, as persons suffering from it have no dread of water. Our eminent Pasteur says, emphatically, "*Dogs with rabies have no dread of water.*" This is true also in man, as has been shown in many cases.

THE DISEASE IN MAN.—In man the initiatory symptoms are said to be slight chills and heats, alternating; some pain or discomfort in the forehead; restlessness, and loss of appetite. "But one of the earliest and most persistent symptoms is an extreme degree of mental agitation and terror," says Ziemssen.

INCUBATION.—Ziemssen says "it varies extremely. In six per cent. of all cases, it varies between three and eighteen days. In sixty per cent., between eighteen and sixty-four days, while in thirty-four per cent. it exceeds sixty days." Haubner writes, "Eighty-three per cent. were within two months: sixteen per cent. within three months, and only one reached four months. The duration of the disease when fairly established is very short; rarely longer than from one to six days. In the 106 cases reported by the Committee of the American Medical Association, the great majority died within four days,—and this is the time given by most writers.

SYMPTOMS.—These are so various, if the actions of the patients are regarded, that nothing definite can be said. In some, the disease is manifested suddenly and is so evidently the result of fear and not actual disease, that the symptoms will be as varied as are the mental and nervous organizations of the patients. They are not as characteristic of the disease as are the symptoms which declare inflammations

of the brain, or the thoracic and abdominal organs. Respiration as a rule is, in quiet cases, normal during the intervals, but during the paroxysm, "it is gasping, irregular, quite rapid, and sometimes accompanied by decided dyspnoea," says Ziemssen. These convulsive respirations (by lookers-on called convulsions) are similar, I have recently been told, to those produced by the sudden entrance into a cold bath, or having cold water suddenly poured on the back of the neck, and are accompanied with spasms of the throat, and sometimes there is vomiting of a foaming, mucus, dark-colored substance resembling coffee grounds. It is useless, now, to give a long account of symptoms, as no writer claims that persons suffering with hydrophobia bark like dogs, or perform other acts which indicate that the dog's nature has been, by the virus, developed in or transmitted to man; and yet scarcely a single case occurs without it being asserted by those in attendance upon it, that the patient was fearfully affected with spasms on seeing water, and barked like a dog, and tried to bite those near to him. In Dr. Leedom's case, the young man who believed himself the victim of hydrophobia was actually going around on his hands and feet like a dog.

We are then rid of two of the symptoms: the barking and the dread of water; and if we could prevent the mental terror we would probably divest the disease of its most agonizing feature and be able to treat it as scientifically and successfully as we treat tetanus.

It is quite time that our profession with its present great enlightenment and immense resources should not stand idly, helplessly by the bed-side of the afflicted patient. We should investigate the case; discover if possible what vital organs are affected; where death has made his attack; and, then bring our weapons of defense and aggression to bear upon him and thus rescue our patient. I have no belief in the incurable character of this disease, if by any means we can rid the patient of his mental terror. I have a confident hope and an earnest belief that Pasteur or some other close observer and investigator of disease—possibly one of this audience—will find a remedy to successfully combat the disease even when at its very height.

CAN THE DISEASE BE PREVENTED?
From the days of Aristotle to the present

time, while the disease seemed to be rather a mysterious one, it was generally regarded as an affection of the brain and spinal marrow. One of the observers of 200 years ago queried whether it is not *wholly* a nervous disease.

Celsus, in order to prevent the virus from acting on the nerves of the part, as well as to prevent absorption of the virus into the system, recommended, as I have already said, the application of cups over the wound. And Galen, in the second century after Christ, recommended excision and cauterization of it; and from that day to this, one or the other, or both, have in all cases where danger was feared, been resorted to by physicians with almost if not quite unvarying success. The celebrated English veterinary surgeon Youat, with an experience beyond that of any one of his time, used caustic on the wound without a single failure. It is many years since I read his book, but I distinctly recollect that it was always successful if done before the accession of the disease. He used only the nitrate of silver. In our own country physicians have depended on excision or caustic, or both; and, so far as I have heard, without one failure in the thousands of persons thus treated. I have incised some and cauterized others and given to them such assurance of their safety that the mind of the patient was set at rest, and the result was good in every case. Strong, truthful, and encouraging as is the above testimony coming down to us through twenty centuries, what do we now hear the eminent Pasteur say? In a pamphlet published and circulated by one of his pupils who is trying to establish a "Pasteur Institute" for the prevention of rabies in those bitten by rabid dogs, at Red-Wing, Minnesota, it is boldly asserted that "the experience of Pasteur and his aids, with a practice vastly greater than any one else with rabies, is that *the use of strong caustics and the red-hot iron, is of no benefit, but rather an injury.*"

How can we account for this rejection of preventive measures uniformly successful through thousands of years, by one who has been so great a benefactor to France? You will scarcely be willing to hear me say that it is simply because he has a preventive measure to introduce which will, if he can throw doubt on the value of the means referred to, bring him an immense revenue. I hope this is not

the cause and I earnestly hope a better, truer reason can be given for his change. But, when, in addition to this charge against the means of prevention long and successfully used, he boldly announces that the bite of even a healthy dog may cause rabies, and that it is only in a Pasteur Institute prevention can be assured, and that large fees come to him from those who at great expense flock to his institute, I feel that he places himself on a plane lower than that on which Stoy or Fry stand. Nothing could be more efficient to bring patients to him from every section of our vast country than this declaration that the bite of even a healthy dog may cause rabies, and that the means of prevention used by physicians are not useful but injurious. It is sincerely to be hoped that the Red-Wing Institute will never be established.

Having given the modes of prevention in use by the profession every where and with great success, yet as they have been denounced by M. Pasteur as more than useless, it is appropriate here to give an account of his means to protect persons who have been bitten by a rabid dog from an attack of rabies.

He says: "I found out that the virus rabiesque loses its intensity by transmission to other animals. With the rabbit it increases, with the monkey it decreases. I took the virus direct from the brain of a dog dead from hydrophobia. With this virus I inoculated a monkey. The monkey died. Then with this virus already weakened in intensity, I inoculated a second monkey. Then with the virus taken from the second monkey I inoculated a third monkey, and so on until I obtained a virus so weak as to be almost harmless. Then, with this almost harmless virus, I inoculated a rabbit, the virus being at once increased in intensity. Then with the virus from the first rabbit, I inoculated a second rabbit and there was another increase in the intensity of the virus. Then, with the virus of the second rabbit, I inoculated a third one, then a fourth, until the virus had regained its maximum intensity. Thus I had obtained virus of different degrees of power. I then took a dog and inoculated him, first with the weakest virus from the rabbit, then with the virus of the second rabbit, and finally with the virus of maximum intensity. After a few days more I inoculated the dog with virus

taken directly from the brain of a dog that had just died of acute madness. The dog on which I had experimented proved completely insusceptible to hydrophobia. The experiment was frequently repeated, always with the same successful results. But my discovery does not end here. I took two dogs and inoculated them with the virus from a dog that had just died of acute hydrophobia. I subjected the second dog to my treatment giving him the three rabbit inoculations, beginning with the weakest and ending with the strongest. This second dog was completely cured, or rather became completely insusceptible to hydrophobia. "*Whoever gets bitten by a mad dog has only to submit to my three little inoculations and he need not have the slightest fear of hydrophobia.*" (1884).

I have already given you the treatment used so long by Dr. Stoy, and without a failure according to the reports—also Dr. Henry Fry's cure or rather preventive treatment in hundreds of cases without a single failure, he says. So too, a Dr. Jos. Emery, of Chester county, was for a long time celebrated as having a preventive that, when properly used, never failed in protecting the person bitten. Of this, more in another place. It may be proper to speak here also of a means considered by the people of Ohio, during a time reaching beyond this century, to be always successful in preventing the disease.

In an article entitled, "Uses of the Madstone," I find that a person bitten applied the tongue to it, and the poison was supposed to be drawn from his system. Hundreds were reported saved. What, now, shall we believe in relation to these secret remedies and the madstone? The Stoy, Fry, and Emery preventives were all vegetable substances, and therefore might have had useful medicinal properties—even if they had not, then they prove that mad dogs—dogs with rabies—are exceedingly rare, and still more rarely are persons bitten by them, and that the numerous fatal cases now reported are cases of false hydrophobia, the result of mental anxiety and fear after being bitten.

No one of you hesitates for a moment in believing that the madstone has no saving power, and, yet, hundreds of people have resorted to it and are convinced of its value in the cases used. But no cases have been presented to show that the

exemptions from the disease were due to the means of prevention used.

I will name another remedy with some proofs that it has real value as a means of prevention according to the testimony of truthful, sensible men. It is the root of the Elecampane—this was Jos. Emery's cure—Stoy's was Chickweed—Fry's a mixture of plants. Some who affect to know say it was Elecampane.

Could every case of true and of false hydrophobia be divested of the mental terror consequent on what the patient had heard of the fearful agony attendant on the disease, as reported in the newspapers and narrated by those who have witnessed cases, or had heard of them in their youthful days, I doubt not that the disease would exhibit symptoms as distinctive and as characteristic as those of chorea or tetanus.

A few years ago Gen'l W. H. H. Davis, editor of the *Doylestown Democrat*, after reading my essay on hydrophobia, published copious extracts from it followed by these remarks: "When a child I witnessed the chasing and shooting of a mad-dog, and, afterwards, listened to tales of horror, told of persons who had been bitten and who had been smothered under feather beds and otherwise hastened to the end of life, that their sufferings should cease. That day of horror has never entirely passed from my memory. I hail with satisfaction anything that may save other children and even adults from unnecessary suffering. If in this age, when the achievements of mind over matter are more clearly understood and recognized, it should transpire that disorders of the nervous system can be treated and cured by the allaying of nervous fears, humanity will lose some of its most excruciating suffering."

Such were his utterances. That the members of this Society should take this subject under consideration must be apparent to us all. As physicians we know that there is nothing in the actual diseased condition of any of the body organs—the mental conditions not being taken into account—which could produce the fearful agony, the horrible manifestation of suffering described as always being attendant on the malady. There is not a single case given to us by the newspapers, from the pen of an eye witness, but is reported as being accompanied by horrible agony and superhuman strength and an

uncontrollable disposition to injure others, and yet post-mortem examinations have proved that there is no evidence of there having been disease which could have produced such suffering.

The fact that the patient afflicted with madness brings before himself the horrors which from childhood he has heard described as the invariable attendants upon it, impels him to perform the acts and exhibit the fury of which he has so often heard. Speculative theories must yield to facts. Every writer on this disease speaks of the rapid weakening of the body, day by day, until death ensues. And, yet, this poor sick person in nearly every case is restrained by cords, bound hand and foot, or held down by strong men, or partially, if not entirely, smothered under feather beds—as in the case reported two or three years ago, as occurring in or near Atlanta, where four men on the top of the bed couldn't keep the victim down, but when two more got on he was quieted—whether dead or alive was not stated.

Our profession confesses its inability to successfully cope with this disease. This should not be. We have left to the proprietors of secret remedies, and the owner of the madstone almost the entire care of those bitten by mad dogs.

It is a reflection on our noble profession that we have wholly neglected to investigate this malady and bring our remedies to bear upon it.

(TO BE CONTINUED.)

A GREAT INVENTOR.—Mrs. Hogns.—“And fwy isn't the old mon a-workin' now?”

Mrs. Grogan.—“It's a invintor he is. He has got up a road-schraper thot does the work of foive min.”

Mrs. Hogan.—“An' how minny min do it take to r-run it?”

Mrs. Grogan.—“Six. It will be a great thing for givin' imployment to the laborin'-man”—*Indianapolis Journal*.

Boy—Me mother wants to borrow a cup of salt, please?

Mrs. Neighborly.—She hasn't returned the cup of sugar she borrowed yet.

Boy—So me mother said, but, yer see, she wants the salt ter mix wid the sugar she returns.—*New York Recorder*.

COMMUNICATIONS.

THE SURGICAL RELATIONS OF THE THORACIC DUCT IN THE NECK, WITH THE EXHIBITION OF TWO DISSECTIONS MADE BY MR. WARD BRINTON.*

JOHN H. BRINTON, M. D., PHILADELPHIA.

I have here dissections illustrating the two most common terminations of the thoracic duct. I had always supposed that the anatomical relations of the ending of this duct were not more abnormal than those of any other duct or vessel in the body. But from the study of several dissections, and especially from the comparison of the descriptions given by various anatomical writers, I find great diversity in this respect. The general law is that the duct shall discharge its contents into the great veins, jugular and subclavian, at the base of the left side of the neck. This is done in several ways.

In the first of these dissections made by Mr. Brinton we have the regular, or normal type, the duct curving over the apex of the pleura and terminating exactly in the angle formed by the junction of the subclavian and internal jugular veins. In the second dissection we find the duct dividing into two branches, these forming a circle by their union above. From this circle one trunk arches outward and divides into three branches. Two of these empty into the subclavian at the distance of one-quarter and one-half an inch from the internal jugular junction. The third branch empties into the internal jugular. Between these divisions passes a communicating branch. A large branch is also given off from the right side of the circle. This passes upward, turns to the left, and, deeply seated, crosses the neck transversely. The last portion of this branch was uninjected.

From the examination of these dissections the two typical terminations of the thoracic duct as described by Meckel can be studied. In most cases it empties into the angle of union of the internal jugular and subclavian veins by one trunk; when more than one trunk exists the terminations of the thoracic duct are in both the

internal jugular and subclavian veins. The duct as stated by this observer rarely opens into only one of these two veins.

In Quain's *Anatomy*, I find that the thoracic duct often divides into two or three branches, which terminate separately in the great veins, as in the second dissection on the table. Sometimes these several ducts again unite in a common trunk, and occasionally one of the branches may pass across and empty into the veins of the right side of the neck. The duct has also been known to terminate in the vena azygos. According to Sappey, there are many varieties of termination; Professor Harrison Allen, in his *Treatise on Anatomy*, states that the thoracic duct may empty into the jugular, azygos, and left innominate vein; infrequently it may be double. Sometimes as many as six terminal vessels are present, which are received into the subclavian, jugular, vertebral, and axillary veins.

The irregular terminations of the thoracic duct are alluded to by Henle and by Breschet. The latter, in his *Système Lymphatique*, describes minutely the many varieties, and instances one case, cited by Haller, from Bartholin, of the communication of a duct branch with the vena cava.

The formation of circles, or insulae, as seen in the specimen before you, is also referred to. I might mention that the multiple termination of the duct is frequently met with in animals.

Hyrtz, so accurate and practical, tells us that the varieties of termination of the duct are very numerous, and do not in the least interest the practical surgeon. I cannot but think that the latter remark is too sweeping, especially in those cases where any portion of an arch formed by irregular terminal branches reaches high into the neck. If drawn upon or stretched by contracting and indurated tissues, and during operation, it might be easily out

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or torn. In an instance where a duct branch passes transversely for a considerable distance to empty into the subclavian vein, it certainly might be readily endangered. It seems to be, therefore, that the possibility of irregular and manifold endings of the thoracic ducts must be considered by the practical surgeon, and

that in operating in this deep seated, dangerous region he should bear in mind its normal abnormalities.

That I have not overrated the chances of accident to the thoracic duct, its terminations, will, I am sure, be evident to the Academy on the presentation of the next paper by Professor Keen.

PINKROOT POISONING.

JAMES E. FREE, M. D., BILLINGS, MONTANA.

March 18, 1894, 10 A. M., Rolland-M., two years and four months old, was given seven spoonfuls of an infusion of pinkroot and senna, for worms. At 2 P. M. he began to cry violently without cause, and kept it up until 3 P. M., when he looked, and acted queer; 4 P. M. threw his head back on the pillow, like a victim of meningitis, indulged in the hydrocephalic cry, began to jerk all over, and soon became unconscious.

7 P. M. temperature 107°, head hot, skin dry, respiration 50, bubbling râles over chest, breathing of the Cheyne-Stokes type. The inhibiting control of the respiratory centre over breathing was lost. The diaphragm seemed to act spasmodically. Breathing was at times stertorous, sighing, moaning.

Heart's action was irregular and tumultuous. The tongue was about natural in color and moisture. A bright red spot looking like hectic flush was on either cheek.

Pupils were widely dilated. Cornea presented the glazed appearance of a person in rigor mortis.

Pulse was too rapid to count. The most pronounced symptom was clonic contractions of the muscles. The chin, mouth, ears, scalp, eyebrows, were moved spasmodically as if the patient was subjected to an acute choreic attack. Abdominal muscles jerked almost constantly. Head was thrown back, and legs stiffened synchronously twice in a minute. Arms were constantly in motion. The bed, a large one, was rattled by the movements of child. Patient had been constipated for two days, and a nurse who was taking care of the child's mother in confinement diagnosed "worms," and administered the

medicine to physic them out. The intestinal canal was in continuous motion, judging from the gurgling within the abdomen.

An injection of hot water brought away four copious evacuations, foul smelling, and containing much undigested food, and many berry seeds. The child had been fed a hard-boiled egg for breakfast.

After the stools, the sphincter was relaxed and patulous. Nothing was retained unless child was turned on his stomach, with trunk higher than head. This position interfered with respiration. No urine was passed during the day.

The mother of the child is an hysterical woman, below the average in intelligence, and has thyroid enlargement. The boy was not bright; bigheaded; and had the look of an epileptic. Symptoms increased in violence, and child died at 12 M.

The United States Dispensary mentions poisoning by pinkroot as a remote possibility, and also says that it is combined with laxatives which prevent its narcotic action from being dangerous. In this case there was no amelioration of symptoms after profuse diarrhoea.

WIDOW—I want a stone for my husband's grave exactly like the other one in the lot.

Agent—But isn't it a trifle small for a man of your husband's prominence?

Widow—No, sir! If Thomas thought a stone like that was good enough for his first wife, I guess it's plenty good enough for Thomas.—*Life*.

AUTHORITY that needs to be frequently asserted does not generally last long.—*Milwaukee Journal*.

FREEDOM FROM RECURRING APPENDICITIS AFTER EVACUATION OF THE ABSCESS AND RETENTION OF THE APPENDIX.*

JAMES M. BARTON,† A. M., M. D.

At the last meeting of the American Surgical Association I reported nine recoveries from operations for appendicitis in which the appendix was not removed. These were all cases of ruptured appendix with circumscribed abscess, with no general peritonitis and no symptoms of obstruction.

The operation consisted in opening the abdomen and using sterilized cheese-cloth to hold the movable intestines back and to protect the general peritoneal cavity while the abscess was opened and emptied. Drains were then introduced, some of the cheese-cloth permitted to remain, and most of the wound closed. No attempt was made to find or remove the appendix.

Before considering the later condition of the appendix in these cases I wish to report, briefly, five more cases upon whom I have operated in the same manner, all of whom also recovered.

Mr. B., aged twenty-three years, a patient of Dr. Cline, of Jersey Shore, Pa. He was operated upon August 24, 1893, on the seventeenth day of the disease.

William C. M., aged twenty years. The operation was performed at Jefferson College on August 28, 1893, on the third day of the disease.

Harry S., also aged twenty years. I performed the operation at the Philadelphia Hospital, September 4, 1893, on the seventh day of the disease.

Richard B., aged forty-four years. The operation was performed at the Jefferson College Hospital, September 17, 1893. It was the third attack, and the present one had existed for thirteen days.

Miss V., aged twenty-two years. The operation was performed November 10, 1893, on the third day of the disease. She was a private patient of Dr. M. B. Dwight, of West Philadelphia.

My object in bringing this subject to your notice is to exhibit several of these patients and to read reports from most of the others to show that none, whose histories I have been able to follow, have been at all troubled by the retained ap-

pendix, and to learn if the experience of the Fellows of the Academy have been similar to my own.

It is becoming widely recognized that this method of operation is accompanied by a low rate of mortality. Richardson in this country, Tait in England and Reclus and Schmidt on the Continent, as well as many others, content themselves in these cases of local purulent peritonitis with protecting the peritoneal cavity and draining. Others, however, still consider that no operation is complete without removing the appendix. In the March number of the *Annals of Surgery*, Fowler advises, in these cases, the removal of as much of the appendix as can be done without separating adhesions, but considers it necessary to remove the rest of the appendix at a second operation.

Of these fourteen cases, eleven were operated upon by myself during the last two years. All on whom I have operated in this manner have recovered, and none, that I am aware of, have had any trouble with the retained appendix since.

As the mortality has been much greater when I have removed the appendix, I now rarely do so unless the appendix is unruptured, or, if ruptured, only when general peritonitis has occurred.

Of these eleven cases I have been able to follow the history of eight, several of whom are here to-night for examination.

The three whom I have not been able to find were hospital cases; two of them were brought to the hospital by physicians. If either of these had had a recurrence needing surgical aid I should probably have known it.

Of the eight whose histories I have been able to follow, none have had the slightest symptom referable to the appendix since the operation. No tumor is to be felt, and no tenderness. Indeed, they all appear to have been singularly free from diseases of all sorts since the operation.

Mrs. C., aged thirty years, is here this evening, and will permit us to examine the region operated upon. The operation was performed November 29, 1892, and though she has been using the sewing-machine steadily ever since, she has enjoyed the

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most robust health. The right iliac fossa is apparently entirely free from disease.

I also present Wm. O. M., aged twenty years. I operated upon him at Jefferson College Hospital, August 28, 1893. He has been in perfect health in all respects since the operation, and there is no evidence of disease in the right iliac fossa.

Harry S. has also been kind enough to come here. I operated upon him September 4, 1893, at the Philadelphia Hospital. He also has been in perfect health since the operation, and presents no evidence of disease anywhere.

Dr. Marshall, of Milford, Delaware, informed me a few days ago that the patient, Mrs. S., on whom I operated for him on February 26, 1892, has enjoyed perfect health ever since, and that on examination he has been unable to find any tenderness on pressure or any tumor in the right iliac fossa.

Dr. Beary, of the Falls of Schuylkill, reports that Mrs. R. T., on whom I operated for him January 20, 1893, has been in perfect health since the operation.

Dr. Oline, of Jersey Shore, Pa., reports that Mr. B. has been in perfect health since the operation; indeed, in better health than for a number of years before.

Dr. Dwight, of West Philadelphia, reports his patient, Miss V., as in perfect health since the operation, and on a recent examination of the seat of the disease there is no tenderness and no tumor to be felt.

Dr. Chandler, of Centreville, Del., reports: "The patient, Mrs. M., on whom you operated for me, April 3, 1893, has made a perfect recovery, and has been perfectly well ever since." He adds, "that from the operations in which he has participated he thinks the removal of the appendix in these cases is not required if good drainage is established. The appendix will take care of itself."

From the uniformity with which full and complete recovery has occurred in the few cases that have come under my care, it looks as though the appendix is not very liable to give trouble if permitted to remain. Indeed, I think it is quite likely, in cases such as we have been considering, that the opening from the appendix into the intestine is closed early in the attack—closed quite as firmly as any ligature would close it, and there is but little probability that fecal matters will ever be again able

to enter the appendix either to cause a fecal fistula to follow the operation or to start another case of appendicitis in the future.

If it were not firmly closed, the pus would never have broken through the walls of the appendix, or, having broken through, the resulting abscess would not have increased in size, but would have emptied itself through the appendix into the bowel.

To further illustrate the strength of this obstruction at the base of the appendix I have observed, in several cases where fecal fistula followed appendicitis, that in none did the feces make their exit through the appendix, but through other portions of the intestines, showing that the inflammatory deposit closing the appendix was even stronger than the healthy bowel.

The mortality following operations for appendicitis is mainly due to general septic peritonitis and to intestinal obstruction.

If we will look into the cavity of a fully-developed abscess, such as we have been considering, we can readily see how these complications may follow the search for or removal of the appendix. The cavity of the abscess is lined with a thick layer of grayish, poorly organized, aplastic lymph, filled with micro-organisms. The appendix lies buried beneath this lymph, and its cavity communicates freely with the general abscess cavity. The opening can occasionally be seen, and is often the only guide by which the position of the appendix can be recognized.

To tear up this fragile and infected lymph, and distribute it through the peritoneal cavity while searching for and liberating the appendix, would greatly increase the probability of establishing a general septic peritonitis.

Intestinal obstruction following operations for appendicitis is probably due to kinking of the recently separated intestines. As they reunite, covered and stiffened as they are by inflammatory deposits, they cannot adjust themselves as readily as at the first formation of the abscess.

To avoid any misunderstanding, let me state that it is only in cases of circumscribed abscess that I have been permitting the appendix to remain.

When the appendix is still unruptured, or when it has ruptured and general peritonitis has occurred, or when obstruction is present, I am in the habit of removing it.

VAGINAL HYSTERECTOMY.*

JOHN B. DEEVER, M. D., PHILADELPHIA.

MR. PRESIDENT AND FELLOWS:—I will not offer an apology for bringing before this body a paper upon "Vaginal Hysterectomy," as I am convinced that this line of work should not be delegated solely to those who work in the field of gynecology, but that it belongs as well to the general surgeon. In support of what I have said may I be privileged to ask the question: Is not the surgeon who meets with all forms of surgical complications better prepared to meet such than the limited specialist who has not had a general surgical training? Furthermore, if the general surgeon in the pursuance of his work has kept up his anatomical work, and opportunity has been given him to observe in hospital, as well as in private practice, the class of cases I propose to discuss this evening, I think you will agree with me that a paper on this subject by a general surgeon should not be considered out of place.

In the discussion of this subject I will consider it under the following headings:

Symptoms, diagnosis, prognosis, complications, anatomical relations, preliminary treatment, methods of operation, operation, report of cases.

SYMPTOMS.—The symptoms of carcinoma of the cervix may be so slight at first that the patient will pay no attention to them, but will attribute the sensations experienced to the change of life or menopause, at which time cancer in this locality usually makes its appearance. From the insidious character of the invasion, considerable involvement will generally have taken place ere the case comes to the notice of the attending physician or surgeon. A slight hemorrhage is noticed, following exertion or coitus, and occurring between the regular menstrual periods. This usually does not alarm the patient until it becomes a frequent occurrence. It has been compared to the hemoptysis of early pulmonary consumption, but is unlike it from the fact that there is no active destructive change going on as yet. A leucorrhœal discharge is present, although without the characteristic cancerous odor. In the first stage the general or constitutional manifestations of cancer do not

present themselves. Pain, however, is one of the earlier symptoms. There may be disturbance either of the digestive or nervous system, or of both.

Following this preliminary stage there is usually a period of latency when the disease seems to "rest upon its oars," prior to the second stage, when all the symptoms are present to a marked degree. The hemorrhages are more frequent, and at times are profuse. There is also present a sero-purulent, irritating discharge, with a penetrating, foul odor, and by contact with the internal and external genitalia giving rise to irritation and pruritus, which often cause as much distress as the primary disease. Pain is severe and radiating in character, and is felt most in the lumbar region. The uterus may be fixed or movable; as the disease progresses the uterus becomes fixed by extension of the disease to the surrounding pelvic structures. Examination with the speculum is often unsatisfactory, unless ulceration or granulation tissue be present; the finger more readily detects the character of the tissue, recognizing neoplasm from its consistency.

The general condition of the patient during the second stage undergoes a marked change. The digestion is very much impaired; anorexia, constipation, etc., are present, and give rise to systematic malnutrition. As a result of this general disturbance, what is known as the "cachectic stage" makes its appearance. The skin is dry and rough, and its color is changed to a muddy yellowish-brown tint.

DIAGNOSIS.—The conditions from which cancerous disease of the cervix might be differentiated are the following: Lacerated cervix, with cervical catarrh; erosion of the cervix; specific ulceration; mucous patches; papillary growths; vaginitis; myoma, and sarcoma.

The diagnosis of the cervical carcinoma is in the main easy, as the cases are usually seen after positive ulcerative and other gross changes have taken place. Where there is simply thickening of the mucous lining of the cervix, with infiltration of the walls, and particularly where the cervix has been torn, it becomes somewhat difficult to differentiate from a long-standing case of cervical catarrh. When, in

*Read before Philadelphia Academy of Surgery, March 5, 1894.

addition to the above conditions, the cervix presents a nodular appearance from occlusion of the cervical glands, the difficulty is increased. This latter condition, however, should not be mistaken for carcinoma, as the nodules are characteristic of malignant infiltration.

If ulceration is present, and the ulcers present a punched-out, ragged appearance, bleeding freely from the slightest touch, suspicion should be aroused. On the other hand, ulceration consequent upon erosion of the cervical mucous membrane is regular in outline and the surface of the ulcer smooth.

Specific ulceration of the cervix, chancral and chancroidal, is rarely seen, and bears little or no resemblance to carcinoma, and in connection with the history of the case, age of the patient, etc., should not cloud the diagnosis.

Mucous patches and papillary growths are more likely to be confounded with the disease than the two preceding conditions; these are, however, distinguishable in that they are more numerous and more widely distributed.

The discharge which accompanies vaginitis in no way resembles that resulting from carcinoma.

Myoma of the cervix might be confounded with a single carcinomatous nodule, but differs from the latter in the absence of infiltration, inflammation, and adhesion of the overlying mucous membrane.

In incipient carcinoma of the mucous lining of the uterus before the body has become involved the only symptoms are the presence of a sero-sanious discharge, not necessarily accompanied by odor, and the general appearance of anemia with debility and digestive disturbances. Pain may or may not be a feature of the case. These indefinite symptoms, together with the failure to respond to well-directed treatment, and the absence of disease of the uterine adnexa should warrant dilatation and curettement for purpose of diagnosis.

In carcinoma of the body of the uterus the presence of a sero-sanious discharge with the characteristic odor, associated with frequent hemorrhage and enlargement of the fundus, would warrant curetting and microscopical examination of the particles of tissue removed. This may be done without anesthesia.

Sarcoma of the uterus is capable of giving rise to symptoms similar in many respects to those of carcinoma. While it is not always possible to differentiate between these affections, they each have symptoms peculiar to themselves.

The symptoms in favor of sarcoma are the presence of a rapidly-growing tumor of the uterus appearing rather earlier in life than carcinoma; hemorrhage, which is more or less constant, and severe pain.

The diagnosis of sarcoma can often be established by a digital examination, when the cervix will be found less patulous than in carcinoma, the tumor presenting the form of a polypoid growth. It may be necessary to dilate the cervix to explore the interior of the uterus, when, if a mass be found, a portion of it may be removed and examined.

PROGNOSIS.—As to the probable outcome of the operation of a vaginal hysterectomy for carcinoma, it is too early in the history of the operation to draw definite conclusions, but the results thus far have proved that especially early and even later operation prolongs life. There is no doubt but that removal of the uterus for carcinoma offers a longer immunity from return than does operation for the same disease in other parts of the body, if done early.

COMPLICATIONS.—Fatal attacks of uræmia may follow, though it is rare to have eclamptic convulsions.

By extension of the disease the bladder and rectum become involved, and as a result cystitis or vesico-vaginal or recto vaginal fistula may arise to add to the already deplorable condition of the patient. Peritonitis from extrusion would cause a speedy termination of the case, as would an embolus.

Pregnancy is a dangerous complication, as septicæmia or fatal hemorrhage is likely to ensue if the case be permitted to go to full term.

ANATOMICAL RELATIONS.—The relations of the ureters are of so much importance in this operation that I have thought it worth while to describe their course. They extend from the termination of the pelvis of the kidney to the bladder, passing through the laminae of the subperitoneal connective tissue. Their average length is about twelve inches. At their commencement they lie about three inches apart, but on nearing the base of the bladder they

run forward and inward and pierce its wall, and at their termination are separated by a distance of about an inch and a quarter.

We may describe them as consisting of three portions—viz., abdominal, pelvic, and vesical. The abdominal portion is in relation posteriorly with the psoas muscle and its fascia, the genito-crural nerve, and the common iliac artery. Anteriorly they are covered by the peritoneum, and on the right side lie partly under the caput coli and ascending colon, and under the descending colon and sigmoid flexure on the left. About the middle of their course they are jointed by the ovarian vessels, which cross them to descend into the pelvis along their outer border. At the brim of the pelvis the right ureter lies just behind the peritoneum, where it can be seen with the ovarian vessels. On the left side the relations of the ureter to the sigmoid flexure depend entirely upon the length of the meso-sigmoid. Thus in one case the ureter may lie behind the sigmoid vessels, and in another directly behind the intestines. After crossing the psoas muscle it crosses obliquely over the common iliac artery above its bifurcation, dropping into the pelvis at this point.

The pelvic portion runs in front of the sacro-iliac synchondrosis, then upon the obturator internus muscle and its fascia, finally leaving the pelvic wall to join the bladder. It lies at first usually to the inner side of the internal iliac artery, subsequently to the outside, and is again crossed by the ovarian veins and artery, which leave it at an acute angle. It then descends in the lower cellular tissue to the floor of the pelvis in a forward direction, passing directly under the uterine artery, and through the uterine plexus of veins and beneath the base of the broad ligament. Finally it crosses the upper third of the vagina to reach the vesico-vaginal interspace, and pierces the bladder opposite the middle of the vagina.

The vesical portion, about half an inch in length, runs obliquely downward and inward through the coats of the bladder to open on the mucous surface at a distance of about an inch to an inch and a quarter from its fellow, and the same distance from the internal urinary meatus.

The uterine artery leaves the lateral pelvic wall at a point just above the ischial spine, reaches the vaginal wall at the level of the os externum, and then runs upward

along the side of the uterus to reach the fundus.

PRELIMINARY TREATMENT.—Much depends upon the preparation of the patient for operation. The most careful antisepsis of the vulva and vagina should be carried out. It is the practice of some surgeons to have the hair covering the soft parts removed; I do not believe this necessary if this region be thoroughly scrubbed twice a day with some good detergent soap for two or three days prior to the operation. The vagina should be cleansed with soft soap, and then both the external genitals and vagina irrigated with a 1:80 carbolic acid solution containing an amount of bichloride of mercury to make it equivalent to 1:4000. The bowels should likewise be carefully regulated, and a mild laxative administered for a few days before operation to thoroughly clean out the lower end of the alimentary canal. If there be present granulations covering the cervix or occupying the uterine canal, or should the cervix be eroded and accompanied by a fetid discharge, it would be wise at first to curette away the granulation tissue exciting the discharge, and the vagina subjected to bichloride irrigations twice or thrice daily, the frequency depending on the character of the discharge.

METHODS OF OPERATION.—In the operation of vaginal hysterectomy one of three methods are practiced—the clamp, the ligature, and that by enucleation (Langenback's). There is no doubt but that the method by enucleation is the ideal one, and should be adopted when the case is suitable for it.

The enucleated method consists first in liberating the cervix by carrying two elliptical incisions through the vaginal wall in front of and behind the cervix, or by a circular incision carried around the cervix, the dissection being made close to the cervix. This should be the rule whatever method be employed. In the removal of neck tumors in the immediate neighborhood of large vessels, or, in fact, any tumor occupying an important vascular locality, the surgeon follows the practice of dissecting close to the tumor. The second step in the enucleation method is in making a sub-peritoneal dissection of the uterus. I think this should be the operation of choice in the early cases at least.

Between the clamp and the ligature method there is in my mind no doubt of

the superiority of the latter. I grant there are a few cases where the clamp method is probably the better operation, but these constitute the exception. The ligature method of vaginal hysterectomy is as much superior to the clamp as is the dropping of the stump in the supra-vaginal, having tied off the uterine appendages and ligated the uterine arteries, over that of the *serre-naud*. The ligature is surgical, while the clamp compared to it is unsurgical.

In the selection of any operation, that which will leave the patient most comfortable, not, of course, exposing her to a single additional risk, should in my judgment be the one of choice. I am frequently confronted with the argument, "Why, the clamp method can be done in fifteen minutes and less." In answer to which my reply is, The ligature method can be done in thirty to forty minutes. The question of a few moments longer in doing the operation is of no import, as, if the case is suitable for a hysterectomy, there will be no shock. The loss of blood in the ligature method is no greater than that in the clamp, if done properly, and the security against secondary bleeding is much greater. The ligature method is one that can be made a strictly aseptic one, and maintained so throughout, while in the case of the clamp there is always some supuration following, thus exposing the peritoneum to infection from without.

The question may arise, Why not close the wound in the vault of the vagina? The wound closes itself. I have observed, and demonstrated after the removal of the uterus, the almost perfect apposition of the cut surfaces; therefore, have never been able to see the necessity of introducing sutures. If bleeding follows reaction from the anæsthetic, and the wound in the vagina has been closed by sutures, it may be the cause of a subsequent abscess, while in allowing the edges of the wound to oppose naturally, and introducing a little packing of iodoform gauze into the vagina, not carrying it into the pelvic cavity, the blood finds its way into the vagina and is taken up by the gauze. By the time reactionary or consecutive bleeding, if you see fit to call it such, would occur, the wound in the vagina would not yet have been sealed off; therefore it finds its way out of the pelvis.

In either the ligature or the clamp method, when the cervix is entirely de-

stroyed, thus making it impossible to grasp it with a vulsella or pressure forceps to pull the uterus down, my practice is to introduce a tenaculum into the uterus, by which I am able to make slight traction, and thus steady the organ; this allows me to free the vaginal walls and expose the supra-vaginal portion of the cervix, which I grasp with the vulsella, and thus command the uterus through the remaining steps of the operation.

Operation.—The bowels and bladder having been emptied, the patient is anæsthetized and placed in the lithotomy position, with her limbs held by assistants. A Sims' speculum is introduced and the cervix uteri exposed. The cervix is then grasped either by a vulsella or a pair of pressure forceps, the latter being less likely to slip or tear out. Traction is made upon the uterus, drawing it downward and forward to expose its under surface. An incision is carried across the exposed surface to the situation of the internal os, or as far away from the eroded tissue as possible, and with the fingers the posterior wall of the vagina and the areolar tissue are freed from the uterus down to the peritoneum. The forceps holding the uterus are then carried downward, and the incision continued to make it encircle the organ. The structures in advance of the uterus are dissected away in the manner before described, great care being observed to keep close to the body to prevent injury to the bladder; having reached the vesico-uterine folds of the peritoneum, the vagina is thoroughly irrigated. The recto-uterine and vesico-uterine folds of the peritoneum are now broken through, and, if the operator so desire, a small piece of gauze or sponge introduced to prevent prolapse of the intestine; this I do not believe, however, to be essential. The female blade of the clamp is then introduced along the palmar surface of the finger, which acts as a director. The blade of the clamp is made to hug the under surface of the broad ligament, and the end of the blade is made to pass beyond its upper limit. The handle is depressed to make the end appear above the upper surface of the ligament, the other blade introduced, and the clamp locked. The opposite side having been treated in the same manner, the attachments are severed and the uterus removed. Should difficulty be experienced in applying the second clamp, the attach-

ment of the side already clamped may be severed, and the body of the uterus loosened and delivered, when the clamp can be easily applied.

A piece of sponge or gauze is introduced, and the vagina is irrigated; gauze is loosely packed around the clamps to prevent ulceration of the soft parts from pressure, and a light packing placed in the vagina to act as a capillary drain.

The clamps may be removed at the end of the second or third day. In removal of the uterus by the ligature method the early steps are the same as in the clamp operation. Having freed the uterus from all its surrounding tissues except the broad ligaments and the peritoneum covering the fundus, the vagina is thoroughly irrigated. The broad ligaments are now to be ligated. An aneurism needle, curved on the flat and set at right angles to the handle, is threaded with a silk ligature and passed through the base of the right broad ligament a short distance from the cervix; this secures the uterine artery. Successive ligatures are then applied until the entire ligament is tied off. As each ligature is tied the included portion is cut free from the uterus. Having ligated and secured the right ligament, the left is treated in the same manner.

If there be an elongated body, as is often found in uterine carcinoma, great difficulty may be experienced in ligating the entire ligament upon one side without tying off and removing a portion of the ligament of the opposite side. By adopting this course the organ can be pulled down and the remaining ligatures easily applied. As the ligatures are being tied down the traction of the uterus should be relaxed. The uterus having been freed from its ligamentous attachments, the peritoneum is broken through and the organ removed.

After the uterus has been removed, it is the custom of some surgeons to close the opening in the vagina. I do not practice this. The cut surfaces approximate themselves, and further favor drainage if we simply pack the vagina and do not stitch.

REPORT OF CASES.

CASE I.—Mrs. C., aged thirty-five years, was admitted to the German Hospital with an extensive carcinoma of the cervix, which had recurred after a pre-

vious curetting and now demanded the removal of the whole organ. The patient was carefully prepared for operation, receiving several antiseptic douches daily for a few days, and also boracic acid baths. The anterior and posterior walls of the vagina were carefully dissected up, and the uterus freed and its broad ligaments tied off in sections. The ovaries were removed with the uterus. Light packing of iodoform gauze introduced into the vagina.

The patient made an uninterrupted recovery, and was discharged in three weeks.

CASE II.—A. B., aged forty years, and unmarried, was admitted to the German Hospital with the following history: For some time past she had been suffering from profuse uterine hemorrhage. Menstrual flow was excessive and painful. Diagnosis of carcinoma of the uterus was made, and total removal of the organ advised.

Operation.—The mucous membrane of the anterior vaginal wall was dissected up until the fundus of the uterus was reached. Treated posteriorly the same way. The broad ligaments were tied off in sections—four on either side of the uterus, which was now removed with the ovaries and tubes. Ligatures now cut short. A light packing of iodoform gauze was introduced into the vagina, and a pad placed over the vulva. The packing was changed on the fourth day; on the seventh day a slight odorous discharge was noticed, which disappeared on the twentieth day after operation. No signs of peritonitis.

The patient was discharged on the twenty-fourth day. Microscopical examination of specimen proved the correctness of the diagnosis—carcinoma in early stage.

CASE III.—Mrs. K. G., aged thirty-five years, admitted to the German Hospital with a history of curetting at another institution for carcinoma of the cervix. At the time of admission a granular mass was found involving the entire cervix. She was again curetted. Six days later vaginal hysterectomy was performed.

Operation.—The cervix was drawn down by means of a tenaculum, and a silk thread introduced through both lips of the same. The anterior vaginal mucous membrane was carefully dissected up from the exterior surface of the uterus. The posterior surface was similarly treated. A small vaginal cavity complicated the enucleation considerably. After the uterus had been

freed of the vaginal mucous membrane, clamps were applied to the broad ligaments. The organ was removed by cutting between the uterus and the clamps. The part was irrigated with boric acid solution, and the vagina packed with iodoform gauze. An antiseptic pad was applied to the vagina. The clamps were removed on the fourth day. Recovery uninterrupted.

CASE IV.—Mrs. K., aged thirty-four years, admitted to the German Hospital with a granulating mass of the cervix. An attempt was made to curette the mass away, but it was found to be too extensive.

Operation.—The cervix was firmly held with a vulsella forceps. The anterior vaginal mucous membrane was dissected away from the uterus. The posterior surface was treated similarly. The broad ligaments were tied off in sections—three ligatures upon either side of the uterus, which was now removed; the vagina was irrigated and packed with iodoform gauze. The dressing was removed on the eighth day, the parts irrigated, and dressing re-applied. The patient made a successful recovery, being discharged upon the fourteenth day.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

PERMANGANATE OF POTASH IN THRUSH.

Drs. Troitski and Karntski (*Gazzetta Degli Ospitali*, No. 6, 1894) regard the permanganate of potash as the most efficacious remedy in the treatment of thrush, in children. Besides application of an alkaline solution they also employ the permanganate locally in solution. A 2-4 per cent. solution of the bicarbonate of soda may be employed for alkaline irrigation, or in very grave cases a saturated solution of this substance. Besides this the physician should touch, two to three times a day, the affected spots with the following:

| | | | |
|---|-----------------------------|----|-----------|
| R | Permanganate of Potash..... | 25 | (grs. iv) |
| | Distilled Water..... | 30 | (℥i). |

Under the influence of this antiseptic the disease rapidly disappears.

REMOVAL OF BONES FROM THE THROAT.

Dr. O. Schliep (*Wiener Medizinische Presse*, No. 13, 1894) in those cases where a fish-bone or any kind of bone has been swallowed, or is lodged in the throat, removal after cocaineization and with the aid of the laryngoscope is impossible, recommends drinking some dilute acid in order to soften the fragment. This suggestion he obtained from the popular employment of vinegar in such cases in Germany. Ex-

periments with vinegar demonstrated that small fish-bones are somewhat softened in fifteen to twenty minutes. Fragments of bone require a longer time, while small scales from shell-fish are softened in one to two hours. Besides vinegar he has also tried 1-5 per cent. solutions of hydrochloric acid, with and without pepsin. Its action is decidedly more energetic than that of vinegar, fragments of lobster's shells only excepted. As hydrochloric acid is a normal constituent of the gastric juice, it rather deserves the preference in rendering fish-bones, etc., non-injurious. It is employed as follows: In case that the bone is situated high up, a stick, around the end of which is rolled a tuft of cotton, is dipped into a 2 per cent. solution (fourteen drops to fifty gms. of water) of hydrochloric acid and repeatedly pressed into the folds of the pharyngeal mucous membrane. In case that it is lower, or if the bone has passed into the stomach, this same solution may be frequently drunk.

PYOCTANIN INTERNALLY IN MALIGNANT GROWTHS OF INTERNAL ORGANS.

Dr. O. Maibaum (*Wiener Medizinische Presse*, No. 13, 1894) has tried this drug in the treatment of internal neoplasms of a malignant nature, in Prof. Wasaliew's clinic in Dorpat, Russia. He administered it three times a day in doses of six cgm.

*In charge of the Translator, F. H. Pritchard, A. M., M. D.

(one grain), in pill form or associated with belladonna as a suppository:

| | | | | |
|---|-----------------------|---|----|-------------|
| R | Pyocainin..... | o | 66 | (gr. 3). |
| | Extr. Belladonna..... | o | 66 | (gr. 1-5). |
| | Cocoa Butter..... | 2 | 00 | (grs. xxx). |

In a case of pronounced cancer of the stomach an astonishing result was obtained; the patient increased in weight, the vomiting and eructations ceased and his appetite reappeared. In another case where there were adhesions with the liver and metastases, improvement followed, but the patient soon left the clinic. Also in cases of carcinoma of other organs it was found to be of great service.

CALOMEL AS A DIURETIC IN NEPHRITIS.

Dr. Dunin and Sklodowsky (*Wiener Medizinische Presse*, No. 13, 1894) of Warsaw, Poland, claim that the prevailing opinion that calomel, though a valuable, diuretic in heart diseases, is of no value in renal affections, to be unjustified. They have employed it in fourteen cases of acute and chronic parenchymatous nephritis without having seen the slightest trace of a harmful action. Amongst these there were two where caffeine was employed without success, and, in two others, the disappearance of the oedema could only be ascribed to the calomel. In five cases no diuresis followed its administration. It was prescribed in the following formula:

| | | | | |
|---|--------------|---|----|-------------|
| R | Calomel..... | o | 30 | (grs. iij). |
| | Opium..... | o | 01 | (grs. 1-5). |

Sufficient for one powder. Three per diem.

At the same time the patient should use a gargle of the chlorate of potash, and apply the tincture of iodine and nut-galls to the gums. The calomel was administered for three to four days in succession.

LARYNGEAL PHTHISIS.

Prof. Cozzolino (*Gazzetta Degli Ospitali*, No. 6, 1894) recommends the insufflation of the following powder in the treatment of laryngeal phtthisis:

| | | | | |
|---|------------------------------|----|----|---------------|
| R | Powdered Iodoform..... | 5 | 0 | (2 3/4). |
| | Powdered Phosphate Lime..... | 10 | 0 | (5 1/2 grs). |
| | Powdered Boric Acid..... | 40 | 80 | (grs. v-xij). |

Insufflate morning and evening, into the larynx.

HYSTERIA IN CHILDREN.

Prof. Jules Simon (*La Sperimentale*, No. 5, 1894) in the management of hysteria in children, advises removal from their accustomed surroundings and family, a quiet life, and a tonic treatment. Anti-

spasmodics, on the contrary, are indicated: valerian, belladonna, etc. The bromide of potash does not always give good results. Valerian is best administered in a decoction with 10-15 gms. (3iiss ziv) of the root in 200 gms. (3vjss) of water, reduced to one-half a glassful by boiling. Of the valerianate of ammonia a dessert-spoonful may be taken at ten in the morning and six in the afternoon. Zinc may be also employed in pill form. Opium is to be avoided as it favors constipation and decreases the appetite without restoring intellectual equilibrium. Preparations of belladonna, hyoscyamus, in doses of a cgm. (gr. 4) of the extract are useful especially in the visceral pains. Camphor, by rectal injection, may also yield good results. Iron is to be excluded for by attempting to cure the anæmia, one will cause excitement. It would be preferable to administer the sulphate of lime in the food in the summer and cod-liver oil during the winter. Electricity which would seem indicated has not given any decided results. The galvanic current has been frequently employed by him without success; an intense faradic current will only increase nervous excitement. Slight galvanic currents with moderate massage are the best. Nux vomica does not render any useful service; it is not the terminations of the nerves which are diseased, but the will; a temporary abdication. Hence the indications are to excite neither the brain nor the skin, and to employ, together with isolation of the patient, valerian, hyoscyamus, etc. The electric bath is warmly recommended by Sagretti, of Rome, in the hysteria of children. He claims beneficial results.

CALOMEL SOAP IN SYPHILIS.

Dr. Watraszewski (*Przegląd Chirurgiczny*, Tom I. Zeszyt II) warmly praises a calomel soap in the treatment of syphilis. It is prepared by carefully mixing calomel with a potash soap in the proportions of 1:2 or 1:3. This soap possesses the important characteristics of mercurial salve and mercurial soap, besides the following additional advantages:

1. It may be employed in inunctions without requiring but very little time for its application—ten to fifteen minutes.
2. It is colorless and does not stain the linen.
3. It will not irritate the skin.

CHRONIC GONORRHOEA IN THE MALE.

Dr. J. Funk (*Przeclad Chirurgiczny* Tom 1, Zeszyt III) regards chronic urethral catarrh of gonorrhoeal origin as chronic gonorrhoea, even though the presence of the gonococcus cannot be demonstrated. In recent gonorrhoea of moderate intensity he recommends oil of sandalwood, with injections of Ricord's mixture, alternating with injections of nitrate of silver solution (1:4000). In invasion of the anterior and posterior urethra he advises deep injections of a 1-2 per cent. solution every five days. In chronic superficial gonorrhoea of the anterior portion, he commences with an injection of nitrate of silver (1:4000-1:2000) alternating with bismuth (1:1000); in case of failure he applies locally a 2-3-5 per cent. every five days, during the intervals injecting Ricord's formula. In chronic gonorrhoea of the anterior urethra with profound alterations, metallic sounds or sounds coated with Unna's salve are of material benefit. Gonorrhoea of the posterior portion requires deep injections of a 2-3 per cent. solution of nitrate of silver and, in case of prostatic invasion, one should use, besides metallic sounds the cooling sound (Winternitz's), suppositories of the iodide of potash or of ichthyol, with the general treatment.

SUFFOCATING BRONCHITIS.

Dr. Hutchins (*La Revue Medicale*, March 18, 1894) speaks highly of the bichromate of potash in suffocating bronchitis. He advises the following formula:

R Bichromate Potash,.....o | 05 (gr. $\frac{1}{2}$)
 Sugar Milk,.....o | 30 (grs. v).
 Water, Twenty teaspoonfuls.
 Triturate.

According to Dr. Drysdale, of Cannes, the bichromate of potash has an elective affinity for the mucous membrane of the respiratory passages. This solution is generally well borne with the minimum dose of one mgm. (gr. $\frac{1}{60}$) for a child of one year, and with oppression and suffocation a maximum dose of three mgms. (gr. $\frac{1}{4}$) which may be diminished in case of vomiting. (This dose seems still too large, for being a powerful irritant to the stomach and secondarily to the kidneys, it is liable to cause vomiting and renal irritation.)

HEMICRANIA.

In the (*Gazzetta Medica di Roma*, No. 5, 1894) the following formula is recommended in the treatment of migraine.

R Citrate Caffeine,.....1 o (grs. xv).
 Phenacetine,.....2 o (grs. xxx).
 White Sugar,.....1 o (grs. xvi).

Sufficient for ten capsules.
 One every three to four hours during the period of the attack.

CORRESPONDENCE.

LONDON LETTER.*

March 20th, 1894.

Affairs medical are very lively, just now, in this colossal city; though in a few days, with Good Friday beginning, the Easter holiday season opens, and with many of the principal schools there will be a vacation until the second week in May.

Numerous holidays is a characteristic feature of English life. These numerous breaks in the annual session, with the easy, slow methods of imparting and acquiring knowledge, partly account for the necessity of the present long course of five years before degrees are conferred; the generally conceded purpose or justification being

with a view of reducing the output of graduates. There are thirteen medical schools in London, with six large general hospitals and an almost innumerable number of special and minor ones. It appears that the number of matriculants in all the schools is about the same this year as usual; but, it is interesting to note the very small average numbers of students who attend lectures or clinics. The writer, in his tour through most of the schools during session hours and the hospital clinics, in no instance saw more than twenty attend at one time. This paucity of attendance was especially noticeable at the clinics, which, though often held by notable teachers, would seldom have more than

*Special correspondence to THE MEDICAL AND SURGICAL REPORTER.

ten or a dozen present. The ubiquitous "grind" is in steady demand in this city by those delinquents who find themselves behind as the time for graduation approaches. He has a practical method of "cramming" and giving "tips" when the time for examination arrives, so that, with his aid, many may slip through who might otherwise fail.

Here antiseptics yet hold well their own. Operating theatres, as a rule, are well-lighted, heated and ventilated. It is curious to note how largely woolen materials are employed as substitutes for cotton. All bandages are made of wool, and, impregnated or simple, it is used largely instead of gauze in ribbon strips in packing. Wool is abundant and cheap in England, but apart from this it has many highly valuable qualities which render its use preferable to cotton fabrics. It is highly elastic, a good non-conductor, and, when deprived of its oleaginous elements, is highly absorbable. Lister's alembroth has the general preference as an antiseptic dressing. In a general way perhaps one would say that in England as in America, surgeons of the present day are not fully innocent of excessive cutting and of the needless performance of many operations. This complete suppression of sepsis provides a guarantee often liable to carry one to undue lengths and to use the knife when it would be infinitely better to act on conservative lines.

The general practice of operating indiscriminately on every type of non-strangulated hernia has been quite generally abandoned, and now few of those so-called radical cures are undertaken unless complicating elements are present.

There are many reasons why Americans should more generally stop at London for a post-graduate course than cross to any of the continental cities. Here there are shoals of clinical material; victualing and lodging are cheap and good; the language is common and the facilities cannot be easily excelled.

From the present outlook, the attendance from London to the International Congress at Rome will not be large. Teachers and others interested in medical school work find it very difficult to get away. Yet, it is said, that as the meeting occurs in holiday time there may be a much larger delegation from Great Britain and Ireland than would otherwise attend.

The general health of London during

the past winter has been unusually good; and to a person going there from America, it would appear odd that any one should ail there who had enough to eat and was comfortably clothed, as the climate is so bracing and regular. But unhappily like all great cities, London has its full share of the destitute poor and dissipated. The average life of an Englishman should exceed that of an American in similar circumstances, and, as a matter of fact, it does. It certainly strikes one as remarkable to see the very large number of very old men who are actively employed here. It appears that of the 21,528 "bus" and tram car drivers of London, 917 are over seventy years of age. Among the literary walks of life it is not uncommon to see men of eighty or ninety years, hale and hearty. Mr. Gladstone is approaching ninety, and is yet the possessor of an active mind, and the late Duke of Wellington, who lived up to eighty-two years, was said to have enjoyed robust health until the last year of his life.—*Un Voyageur*.

"Doc."

If it has been your misfortune to be called "doc," and if this recognition has become at all general among your friends you might as well move to some other place. A man may be called a thief, a liar and a dead beat, and yet he may prosper and live upon the fat of the land. But once let him be called "doc" and his professional success is at an end. We would prefer to spend a night in the station house, so far as its effect on our professional success is concerned rather than to have our friends notice our approach by saying, "There comes doc." If a man calls you "doc" you need never expect a penny from him for any professional services you could render. His answer is sure to be, "All right, doc, in a few days that will be all right." "Doc" means disaster. "Doc" is the culmination of all calamity. "Doc" is a catastrophe given at one stroke. "Doc" is the warning that we have reached the extreme limit of our usefulness. "Doc" is the hand which points us to the next town. Shun it, my young friend, as you would flee from a Kansas cyclone or a prairie-fire. Knock the man down who first dares speak it to you; and call upon the whole medical profession for vindication of your righteous deed.—*Nat'l Med. Rev.*

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SATURDAY, MAY 5, 1894.

EDITORIAL.

THE REVISED VERSION.

Heretofore, the REPORTER has purposely refrained from commenting upon the question of the revision of the Code of Ethics, because it believes the importance of the subject has been much exaggerated, and because, so far as the great body of the profession is concerned, the discussion is unprofitable, as in the settlement the profession at large has no voice, either directly or through duly authorized representatives. It is the current impression that the Code of Ethics is a system of rules established by, and binding upon the entire medical profession of this country. As a matter of fact it is no such thing. The Code of Ethics is a declaration of the American Medical Association and its provisions are obligatory only upon members of that association and upon such others as may voluntarily yield allegiance to the action of that body. Why its influence has extended so largely over the profession will appear later on.

That magnificent organization called the American Medical Association, is gen-

erally regarded as the representative body of the medical profession of North America. And so it is, in the narrow sense that its members are drawn from all parts of the continent and are representative of the *personnel* of the American profession. Strictly speaking, however, it is not representative, for it is not a body of delegates duly authorized and empowered by the profession at large to take any action or formulate any measure, the results of which would be obligatory upon all practitioners. Like any other organization, the Association has the right to make rules and regulations for the government of its own membership, and its action is in honor binding upon all persons holding membership therein. But its power stops short at that point. There are, in round numbers, one hundred and twenty thousand practitioners of medicine in the United States, while the total membership of the American Medical Association does not exceed, if it reaches five per cent. of the entire number. There are

social and physical peculiarities in America, which render impracticable a medical central organization representative in the sense that the British Medical Association is representative of the profession of Great Britain. It is true that a portion of the membership of the American Medical Association is made up of delegates from various medical societies in affiliation with the Association, but if such delegates possess any authority whatsoever to legislate—which they do not—their action could affect only the societies they represented. It would be unwise to assume that the majority of the profession is amenable to the regulations of the various bodies represented in the Association. But in addition to such delegates, a very considerable portion of the membership of the Association is made up of individuals, who, by no stretch of imagination can be considered representative of any save themselves. Thus the American Association, as at present constituted, represents only itself, and consequently can legislate only for itself.

This view of the situation is generally lost sight of in the more or less intense discussions, *pro* and *con*, that are being exploited in current medical journals. Why it so happens, and why the Code of Ethics exercises so strong an influence on practitioners who are not directly subject to its provisions, renders necessary a few words upon the code itself.

What is the Code of Ethics? We venture to say that not twenty-five per cent. of the medical profession can answer the question in detail. We doubt very much if two per cent. of the entire number graduating medicine in 1894, have any satisfactory knowledge of the subject, either from their own study, or from their teachers, or from information gained in any authoritative manner. If asked, most of them would state such an idea of it as they may have, to be, that it forbids, under dire penalties the concession of any virtue to

exist in an "irregular," or holding any communication with such an one; forbidding partial or entire ownership in any patented instrument or appliance; the ownership, or use, or endorsement of a secret, or proprietary medicine; or indulgence in personal advertising. Perhaps some might include a few indefinite ideas of formal courtesies that should exist between physicians, but, as a general rule, the conception would be limited to the "shalt not's." On the other hand, those more familiar with the code, depending upon their point of view, may esteem it anything from the straight gate and narrow way leading to a medical Paradise—and few there be that find it—to something analogous to that patriotism which Dr. Johnson defined as "the last refuge of a scoundrel."

But the Code of Ethics is none of these. As it exists to-day it is a moderate, dignified and liberal expression of the best guiding principles drawn from the experiences and opinions of the best men among the profession and for a considerable time, the observance of which principles in daily life tends to conserve the harmony and unity of a body of men working with a common purpose toward a common end to the benefit of humanity. The present discussion of the Code of Ethics is brought about, not so much by a lack of elasticity of the principles of the code itself, as it is by deductions drawn from an inelastic interpretation thereof.

It will be observed that the code does not assume the authority of a statute law. At the farthest it pronounces certain practices, not necessarily immoral in themselves, when brought within the domain of medical practice to become reprehensible and derogatory to the dignity of the profession. But it does not provide any penalty for failure to observe its declarations, which are capable of a much wider interpretation than that almost universally given. When the code was formulated,

not one new principle was enunciated, not one new practice advocated, not one new condition deprecated. Every principle incorporated therein was common to the entire profession; existed before codification was thought of; obtains to-day with little reference to the written code, and will continue in force hereafter, whether or not the code is modified, or whether it exists at all. The code voices the beliefs of the profession; in no sense did it create them, and it does but little to sustain them. So far as morality is concerned, the code is observed by those who do observe it, not because it is *The Code* but because the principles embodied therein are governing principles with the individual; and where the belief and practice of these principles is not characteristic of the individual, the code is utterly powerless. Regarded as an expression of moral law alone, the Code of Ethics sinks into insignificance when compared with its fundamental principle as embodied in the Golden Rule. As a system of morality it is very inferior to the code contained in the Ten Commandments, together with the Golden Rule. It is because the Code of Ethics is an expression of the application to a particular branch of human endeavor, of recognized moral principles which obtain among men and not because it is the dictum of any association of men, that it is so generally regarded as binding upon the entire profession.

No claim is made that the Code of Ethics is essential to the development or progress of medicine as a science. Indeed, a primary condition for the advancement of science is, that it shall be free from artificial and arbitrary restraints.

A Code of Ethics is immaterial so far as the acquirement of a medical education is concerned, and finds no recognition in the medical curriculum.

The Code of Ethics is not regarded as a qualification for admission to the ranks of the profession. In so far as it has any

definite influence, that influence is not exerted until a practitioner comes into contact with his fellow practitioners, and it would seem that the only occasions upon which the existence of the code becomes evident, are occasions when one practitioner, becoming dissatisfied with the conduct of another, hunts around for a moral scale with which to determine the obliquity of his neighbor.

There are many among the most enlightened and progressive, whose characters and abilities are glories of the American profession, who resent the idea that the medical profession is peculiarly in need of a written code of ethics. They believe, and are justified in their belief, that physicians require no hard and fast laws to define what is right and what is wrong, or anything more than that unwritten consensus of belief sometimes called public opinion. An incontrovertible proof that the abolition of a written code does not mean the abrogation of all sense of morality, or of courtesy, or of ability, and that the absence of a specified code does not entail a wild plunge into practices and conditions which that code would designate reprehensible, is furnished by the profession of the State of New York. The New York profession declined to permit the American Medical Association to dictate in matters of conscience, and, as in honor bound, withdrew from that association, declaring independence of any *written* code of ethics. No evidence is presented, as yet, that the medical profession of New York is less able, less courteous, less earnest or less effective, than is the profession in any other part of the country. Curiously enough, one can observe a constant stream of men from all parts of North America pouring into the centre of the New York profession for post-graduate study and for a chance to see all that is new and best in modern medical science. This is sufficient answer to those who pro-

claim that the Code of Ethics is the one bar restraining the profession from falling over itself in a mad effort to consult with irregulars, or to patent some device, or to seek notoriety through the public prints. As a matter of fact the controlling principles now in existence would remain undiminished in force if the code were utterly repudiated.

Although the idea of any interference with liberty of conscience is utterly repugnant to the American mind, and although every attempt to make regulations that will in any way curtail the freest exercise of the individual's rights to his own convictions of morality will inevitably fail, we are convinced that the *written* Code of Ethics has been and is of benefit to the medical profession. Undoubtedly it has been much abused. Misuse of the code has sometimes made it appear as an impediment in the progress of medical science, but wherever the code has been charged with obstructing progress or with involving the profession in an absurd position, investigation will show that it has not been by an application of the *principles*, which alone give value to the code, but by the misapplication of narrow and arbitrary constructions of the meaning of declarations, which themselves are second-hand deductions from the general principles premised.

The only value possessed by the Code of Ethics is (to quote the Proem of the Report to the American Medical Association) that of "an ideal code which is the crystallization of the best thought and sentiment of any considerable body of men who have for long periods been associated with a common purpose, with reference to the regulation of their conduct in their relations to one another and to society in general.

"Such a code forms an ideal standard, to the requirements of which each individual should strive to attain—a lamp to the feet of the young and inexperienced—

a mirror into which the more mature, glancing, may be able to judge whether or not they are swerving from the paths of rectitude and honor."

But especially is it of value as a guide in questions of professional *etiquette*, for "by due conformity to its requirements the prosecution of affairs is facilitated, friction diminished, misunderstandings obviated and intercourse rendered more agreeable; it cannot be neglected by physicians any more than by other classes of society. The peculiarly delicate and personal character of the relations of physicians to their patients naturally involves conditions which call for especial provision in this respect."

Whatever may be the final action of the American Medical Association—and the Association is a powerful factor in moulding medical public opinion—it should never lose sight of the purpose of its existence, which is to *grow into* an organization of a truth representative of medical science in America. If it is deemed necessary to incorporate a declaration of ethics in the general statements of its purposes, it must make that declaration broad enough to include widely varying interpretations, the extremes of which equally may be held in good faith, and to permit of the free exercise of individual judgment as to right and wrong. It should be a medical republic from citizenship in which ethical faith should be no bar. The moment limits are placed upon the free exercise of individual thought and conviction, and the acceptance of a strict and invariable set of rules of conduct is made a qualification for membership that moment, by its own act, the Association ceases to be truly representative of medical science, in that it debars men who may be in every other way qualified and recognized. Only on the broadest possible platform can the American Medical Association achieve the purpose of its organization—a truly representative body of a united profession.

ABSTRACTS.

PERMANGANATE OF POTASSIUM AS AN ANTIDOTE FOR MORPHINE.

Dr. William Moor, (*N. Y. Med. Rec.*) writes: In offering to the profession a new antidote for morphine it is not my desire to speak of a new, heretofore unknown or unused chemical body; on the contrary, the substance which forms the subject of these lines is one with which every physician and pharmacist is familiar. The term "new antidote" simply relates to the fact that the substance in question had not previously been used for the purpose of antagonizing or, rather, destroying morphine, for I don't know of a single instance in which permanganate of potassium— MnO_4K —has been used as an antidote for morphine.

I have paid a good deal of attention to the therapeutics of permanganate of potassium during the past year, thinking that such a powerful destroyer of organic matter should be more utilized in the treatment of certain gastric disorders that are associated with putrid fermentation of the ingesta, also in cases of cancer of the stomach to suppress the fœtor of the breath, which renders patients a burden to their surroundings, and came to the conclusion that its mode of administration was at fault, inasmuch as no one likes to drink a purple, "poisonous" looking liquid, and, on the other hand, if given in pill form, it would act as a caustic upon a very small part of the glandular lining of the stomach, thus causing distress without any beneficial result. After some trials I found that the best way of administering it was to have it made up in pills with cacao butter and talcum or kaolin, and to direct the patient to drink very slowly a glassful of water just one minute after taking the pill, for the latter begins to disintegrate in one minute at the temperature of the body. By using this method I successfully combated the extremely disagreeable odor in a case of cancer of the stomach. About that time I treated a well-known actor suffering from acute pleurisy. This gentleman was addicted to morphine, and as I had taken much interest in him, I earnestly sought the best plan to break his habit. The idea occurred to me that perhaps permanganate of potash might de-

compose morphine, the latter being an organic substance, and that by making use of a certain method I could eventually break this habit without restricting him from taking his morphine. My patient, however, started on a professional tour just when I began to put my idea to a test. This circumstance did not prevent me from continuing my researches as to the effect of permanganate of potassium on morphine, and to-day I am permitted to offer to the profession what I consider to be the antidote *par excellence* for morphine.

In the following remarks I shall give a brief outline of the experiments that led me to this conviction. Pouring a solution of one grain (0.06 gramme) of MnO_4K , to one ounce of water (31 c.c.) into a solution of one grain of sulphate of morphine to one ounce of water, I noticed that this mixture did not for an instant assume the purple color of a MnO_4K solution, but at once formed a greenish liquid; and that after a few moments a dark precipitate would sink to the bottom of the test tube, leaving an almost colorless, tasteless liquid, in which the presence of morphine could not be detected. Knowing my great susceptibility to even very small doses of morphine, I could easily ascertain whether or not this colorless, tasteless liquid possessed any narcotic qualities. The road of safety being the best way, I began by taking a mixture of one-sixth of a grain of sulphate of morphine and one ounce of a 1 to 2000 MnO_4K solution. Under ordinary circumstances one-sixth of a grain of morphine has a profound narcotic effect on me, lasting for several hours; I, therefore, rarely have taken for analgesic purposes more than one-eighth of a grain. The above-mentioned mixture of one-sixth of a grain of sulphate of morphine and one ounce of a 1 to 2000 MnO_4K solution produced no effect whatever on me. Gradually I increased the amount of morphine, and correspondingly the amount of permanganate of potassium, until I took two grains of the sulphate of morphine in one dose with the same amount of permanganate of potassium in solution. The

results of these experiments, however, did not demonstrate that permanganate of potassium was an antidote to morphine, as it was quite possible that it might be deoxidized by the organic matter of the buccal cavity, œsophagus, and stomach, chiefly by the contents of the stomach, before it could act on the morphine. To gain certitude on this point I conducted a series of experiments, a synopsis of which is as follows:

1. A 1 to 2000 solution of permanganate of potassium in water was held in the mouth for fully five minutes, when it still had a dark-red appearance, approaching the characteristic deep purple color of a $Mn_2O_7K_2$ solution, although the tongue and the gums have become brown.

2. If we dissolve one drachm (4 c.c.) of the white of egg in one ounce (31 c.c.) of water, and to this add one drachm of a 1 to 250 solution of permanganate of potassium in water (one-fourth grain of $Mn_2O_7K_2$) the mixture will for a moment have a purplish color, and after stirring it for one minute will be of a reddish-brown color, and have a distinct taste of permanganate of potassium. After five minutes, on filling two test-tubes with this mixture and adding to one of them a small quantity of sulphate of morphine—this latter being an energetic deoxidizer of $Mn_2O_7K_2$ —but adding nothing to the mixture in the other test-tube, the former mixture will at once become of a much lighter color (light amber) than the one without morphine. Even after thirty minutes this differentiation can be affected. Thus we see that it takes one drachm of the white of an egg at least thirty minutes to completely deoxidize one quarter of a grain of the permanganate. Now, I found that one quarter of a grain of permanganate will be deoxidized by exactly the same amount of sulphate of morphine in one second—for the sake of convenient calculation one moment may be considered as one second—therefore one drachm of sulphate of morphine deoxidizes one quarter of a grain of the permanganate at least seventy-two thousand times quicker than a drachm of albumen would do it, assuming that the latter could accomplish it in five minutes. But as we saw that the deoxidization was not complete after the elapse of half an hour, we are justified in saying that the chemical reaction between the permanganate and the salt of morphine is infinitely

more rapid than the one between the former and the white of egg.

3. By substituting for the albumen one drachm of peptone, in the experiment just related, we find that one grain of $Mn_2O_7K_2$ is not completely deoxidized by one drachm of peptone in five minutes. Calculating in the same manner as before we come to the conclusion that the rapidity of reaction between the permanganate and the salt of morphine is at least eighteen thousand times greater than the one between the former and peptone.

Having gained the knowledge of these facts it is not surprising that I could swallow with impunity toxic doses of sulphate of morphine followed in a few moments by a corresponding amount of the chemical body which I was justified to consider the antidote *par excellence* for morphine. Thus, on one occasion, four hours after a full dinner, at a time when the stomach must have contained a great amount of soluble peptones and other organic matter, I took two grains of the sulphate of morphine in about half an ounce of water, followed in one minute by three grains of its antidote—for safety's sake one grain more than necessary—dissolved in four ounces of water. In another instance, on January 9th of this year, three hours after a light supper, I took, in the presence of several colleagues belonging to the staff of the West Side German Clinic of this city, three grains of sulphate of morphine, followed in about thirty seconds by four grains of permanganate of potassium, both in aqueous solution. I was perfectly confident that the antidote possessed such a wonderful affinity for the morphine that it would select it instantaneously from among the contents of the stomach, and thus render harmless what might have easily been a fatal quantity to one so susceptible as I am to even very small doses of this alkaloid. A striking demonstration of the astonishing selective faculty of $Mn_2O_7K_2$ for morphine can be shown by mixing two hundred and fifty grains of the white of egg with one ounce of water, dissolving in this mixture one grain of sulphate of morphine and adding to the whole just one grain of the permanganate dissolved in one ounce of water. After thoroughly mixing not a trace of morphine can be detected; which conclusively proves that the molecules of the antidote instantaneously selected the molecules of morphine

without being interfered with by the albumen, though the quantity of the latter so greatly exceeded the quantity of morphine.

The question arises, What becomes of $Mn_2O_3K_2$ and $C_{17}H_{19}NO_3 + H_2O$ (morphine) after they have reacted upon each other? While it is easy to determine that the permanganate is deoxidized by the morphine with formation of manganese binoxide— MnO_2 —manganate of potassium— $MnKO_2$ —and potassium hydroxide— KHO —thus leaving O , for the oxidation of morphine, this latter undergoes changes, the nature of which I have not yet been able to determine, but hope to be able to do so in the near future.

In case of poisoning by any of the salts of morphia, ten or fifteen grains of the antidote dissolved in six or eight ounces of water should be administered at once and repeated at intervals of thirty minutes three or four times, or even more often. Permanganate of potassium, as well as the salts of manganese, are comparatively harmless even if given in large quantities. I have poured into the stomach of a rabbit weighing four pounds a solution of five grains of $Mn_2O_3K_2$ in two ounces of water, and one hour later two grains more dissolved in one ounce of water, without noticing any toxic effects whatever. One ounce of the sulphate of manganous oxide has caused only brisk catharsis (Dr. Thompson).

In cases of poisoning by the alkaloid itself or by tincture of opium (laudanum), also by opium, it is advisable to acidulate the antidotal solution with diluted sulphuric acid, or in the absence of this with some white vinegar (not red vinegar), by which the insoluble morphia will be at once converted into the soluble sulphate or acetate.

I have strong reason to believe that the administration of permanganate will be of beneficial effect even after absorption of the morphine has taken place. This statement I base on the following:

Professor Edward Hitzig,* of Halle, two years ago, proved beyond a doubt that morphine which was injected subcutaneously into dogs was secreted by the glandular lining of the stomach. Hitzig succeeded, by washing out the stomachs of animals that had received morphine subcutaneously, in obtaining fully one-half of

the injected amount during the first hour after the injection. It is therefore a logical necessity that an antidote which acts instantaneously must destroy in the stomach a certain amount of poison that got into the circulation either through hypodermatic injection or through absorption by the stomach, for it is evident that the same circulation which conveys a poison from the peripheral parts of the body to the stomach, must also bring back to the latter a part of the poison which previously was absorbed by it. I intend to carry out a series of experiments upon animals to prove this conclusion; for the present I just state that some experiments for this purpose upon rabbits have been highly encouraging. As to the effect of permanganate of potassium upon other alkaloids, I shall briefly enumerate the results I have obtained.

Atropine.—One grain of sulphate of atropine dissolved in one ounce of water added to one grain of permanganate of potassium in half an ounce of water. Color, purple, as if the solution contained only permanganate of potassium. After four hours, color still purple, no change from original permanganate color; one drop instilled into a person's eyes widely dilates the pupils in a few moments; midriasis lasting over twenty-four hours. After eight hours, color dark red, taste intensely bitter; addition of sulphate of morphine gives the characteristic reaction (dark precipitate, colorless liquid above it). After twenty hours, color dark brown, taste intensely bitter; addition of morphine gives the characteristic reaction. Thus permanganate of potassium has practically no effect upon atropine.

Cocaine.—One grain of cocaine muriat. to one ounce of water added to one grain of permanganate of potassium in half an ounce of water. Color, purple, as if the solution contained only $Mn_2O_3K_2$.

Four hours later, color dark red, taste intensely bitter; one drop instilled into a person's eye causes decided midriasis lasting half an hour; addition of morphine gives the characteristic reaction. Eight hours later, color grayish red, taste bitter; applied to the pharynx distinct difficulty in swallowing noticeable; dark precipitate on the addition of morphine.

Practically no effect on cocaine.

Veratrine.—Two grains of veratrine muriat. to half an ounce of water added

**Berliner Klinische Wochenschrift*, No. 49, 1892.

to two grains of permanganate of potassium in one ounce of water. Color, purple. Ten minutes later, purplish red. Fifteen minutes later, dark brown; precipitate on addition of acetate of morphine. Thirty-five minutes later, precipitate with brownish liquid above, the latter turning light on the addition of acetate of morphine, and if applied to the nasal mucous membrane causing violent sneezing (one of the characteristics of veratrine). Useless in veratrine poisoning.

Pilocarpine.—Two grains of pilocarpine muriat. to two ounces of water added to two grains of permanganate of potassium in one ounce of water. Color, purple; after five minutes, still purple; after forty minutes, carmine.

After seventy minutes, color carmine; one drachm injected subcutaneously into a rabbit causes lachrymation, salivation, profuse perspiration, irregular, rapid breathing (160), three or four copious watery discharges.

After three hours, color still red; addition of morphine gives the usual reaction. Practically without effect on pilocarpine.

Aconitia.—Two grains of aconitine to two ounces of water + two grains of permanganate of potassium to one ounce of water. Color, purple. After stirring for two minutes, same color.

After two hours, color unchanged; half a drachm (2 c. c.) injected into a full-grown rabbit; animal restless in a few moments, turns his head to the side, makes rapid swallowing motions, salivates, is evidently nauseated; difficult, irregular breathing, tremor, opisthotonos; animal lies on its side, apparently in *extremis*, but after ninety minutes symptoms begin to abate.

After twenty-four hours, color still reddish purple. Dark precipitate by addition of morphine. No effect on aconitine.

Strychnine.—One grain of strychn. sulphat. to one ounce of water + one grain of permanganate of potassium to half an ounce of water. Color, purple; after five minutes, red; after fifteen minutes, dark brown, intensely bitter; after thirty minutes, same color, taste intensely bitter. Addition of morphine, black precipitate, colorless liquid above.

Could not be depended upon in strychnine poisoning, if the stomach should contain organic matter, which is the rule.

I now submit this paper to the unprejudiced criticism of the profession, and hope that my *confrères* will aid me in developing the ideas laid down in it. If my humble efforts should result in saving human lives, I should feel amply rewarded.

Headache.

R Caffeini Citrat. } ss ʒi.
Ammon. Carb. }
Elix. Guaiac. } si.
M. Sig. Teaspoonful every hour until relieved.
—Exchange.

For Dysmenorrhœa.

In ovarian neuralgia and dysmenorrhœa where opiates cannot be tolerated, the following will be found useful:

R Ext. Belladonnæ gr. 1-5
Ext. Stramonii gr. 1-5
Ext. Hyoscyami gr. 1-4
Quinine Sulphatis gr. 1-2
Mn. pil. No. 1.
—Steer.

Sciatica.

Sciatica and other neuralgias:

R Tinct. Aconit }
Tinct. Colch. Sem. } ss equal parts.
Tinct. Bel. }
Tinct. Actæa Racem. }
S. Six drops every six hours.
—Metcalf.

Hay Fever.

Dr. T. F. Sterling uses:

R Eucalyptol si.
Glycerin si.
Tinc. Opil si.
Aq. Dist. q. s. ʒvi.
M. Sig. Use with atomiser three or four times a day.
The complaint will be overcome in a few days.

Fetid Diarrhœa in Children.

Dr. E. Tompkins (*La Semaine Médicale*) speaks highly of the following, in the fetid diarrhœa of children as an intestinal antiseptica:

R Calomel 10 grms (grs. ʒss).
Sulpho-Carbonate of Zinc 15 " (grs. ʒjss).
Subnitrate of Bismuth 5 grms (ʒij).
Pepsin ʒ " (grs. xxx).
Sufficient for twelve powders. Three per diem in a child of one year.

For Bronchitis.

R Sp. Terebinthinæa ʒij.
Acid Acet. ʒiv.
Vitell. Ovi one
Aque Rosæ ʒiiss.
Ol. Limonis ʒj.
M. Sig. Apply morning and evening.

Aitkin extols this liniment very highly in bronchial diseases.

FRAUDULENT MEDICAL INSTITUTIONS.*

Of the twenty-one more or less active diploma "mills" still in existence in the United States, as described in the Report on Medical Education, by the Illinois State Board of Health, the following are among the most noteworthy:

"*Chicago Correspondence University*," Chicago, Ill. Incorporated in 1885; re-incorporated in 1887. "*National University of Illinois*," Chicago, Ill. Incorporated July 25, 1889. These two institutions, incorporated by the same person, have had no existence as teaching bodies for purposes of medical instruction, but are operated solely for the sale of their so-called "diplomas." A "diploma" of this "National University," signed "F. W. HARKINS, Præses," and issued to THOMAS J. REDMOND, "*datum pridie Januariæ, Anno Domini, MDCCCLXXXIV*," was offered for record by the said REDMOND in Logan County, Idaho, May 14, 1891. The discrepancy between the date of incorporation, 1889, and the date of the "diploma," 1884, has not been explained.

In September, 1892, the secretary of the "University," one RUDOLPH A. VAN ANGELBECK, "Lit. D. F. N. U.," wrote from Pella, Iowa, offering the degree of M. D. to a graduate of the Chicago Ophthalmic College. The following is an extract from VAN ANGELBECK's second letter: "In case you are afraid your diplomas do not entitle you to the M. D. degree, apply at once for a Fellowship, remitting \$30 for same. Our Fellowships entitle holders to any degree." VAN ANGELBECK was arrested and indicted in March, 1893, for misusing the United States mails in carrying on his sale of the degrees of the "National University."

In November, 1892, the Hon. JOHN W. FOSTER, Secretary of State, forwarded the complaint of the Department of Justice of the city of Amsterdam, Netherlands, showing that "this 'National University of Illinois,' at Chicago, has been selling medical diplomas to foreigners who have not taken its courses." One "PROF. BLACKBURN, M. A., D.Sc., LL.D.," was the agent for sale in London, England,— "price, two guineas."

During 1893 it transpired that these

"diplomas" were being peddled under representations leading to the belief that they were from the new University of Chicago. DR. GOODSPEED, Secretary of the Chicago University, has no doubt that the University is being injured by HARKINS and his "diploma mills," and "would like to see the matter thoroughly exposed everywhere, particularly in England and Canada."

"*Malok's Brood*."—During the past three years one JOHANN MALOK, of Chicago, has profited by the wide-open incorporation laws of Illinois to the extent of securing charters for a brood of fraudulent diploma-selling institutions ostensibly formed—according to the language of their articles of incorporation—"To instruct students in medicine and surgery and to give diplomas to graduates;" "to educate pupils in medical science, to graduate them and to issue degrees of M. D., and honorary degrees of M. D., and to issue diplomas as graduates of obstetrics for accoucheurs and midwives;" "to educate people in all branches pertaining to medical science and obstetrics, dentistry, hydrotherapeutics, magnetism, hypnotism, and in everything that is for the benefit of the human body; and to graduate in the same and to issue diplomas and all kinds of degrees and honorary degrees for the same in present or absent." This last quotation is the "enlarged object of the German Medical College," chartered by the State of Illinois, December 28, 1891, certificate of "enlargement" filed by the Secretary of State, July 14, 1892.

The first formed of the Malok brood was the "German College of Medicine and Obstetrics," charter granted February 19, 1891. Then the "German Homœopathic Medical College," charter granted December 8, 1891. Then the "German Medical College," charter granted December 28, 1891; and the "German-American Homœopathic Medical College," the "German College of Gynecology, Pædology and Obstetrics," the "German Academy of Physiatrie Physicians," etc. These institutions have been repeatedly and publicly denounced as fraudulent by the Illinois State Board of Health and their so-called "diplomas" refused recognition. Nevertheless, they are legally incorporated under the laws of the State of Illinois.

[* Compiled for the Journal of the American Medical Association.]

Evidence of the sale of the Malok "diplomas" in Germany and elsewhere is being accumulated with the view of securing a repeal of these charters.

"*Indiana College of Medicine and Midwifery*," Indianapolis, Ind. Chartered in 1878 by one CHARLES P. HEIL, who, at the time the Illinois Medical Practice Act went into effect, was at the head of the "Northwestern College of Midwifery," in Chicago. His "college" was refused recognition, and he, himself, was denied a certificate by the State Board of Health. Being thus compelled to leave Illinois he removed to Indianapolis, where he started his "Indiana College of Medicine and Midwifery," attention to which was first called by PROF. AUSTIN FLINT, of the Bellevue, in a letter to the Secretary of the Illinois Board, April 9, 1890.

DR. FLINT inclosed a diploma of HEIL's institution, issued March 12, 1890, and conferring the "degree of Doctor of Medicine and Midwifery" upon one ALEXANDER KUNTSLICH, by whom the diploma was presented to DR. FLINT for registration under the laws of the State of New York. Certificates of the institution were presented to the Illinois Board by midwife graduates, but were refused recognition, and HEIL's subsequent career may be found under the title, "Ohio College of Obstetrics, Medicine and Midwifery"—*q. v. infra*.

HEIL also announced his Indianapolis institution as the "Department of Obstetrics, Indiana Eclectic Medical College," a college not recognized by the Illinois State Board of Health.

"*Ohio College of Obstetrics, Medicine and Midwifery*," Cincinnati, Ohio. This institution was originally located at Indianapolis, Ind., see "*Indiana College of Medicine and Midwifery*," *supra*. In 1889 HEIL, the projector, obtained a charter under the laws of the State of Ohio, and began operations in the city of Cincinnati. In 1891 he was reported in the *Medical and Surgical Register* of the United States as living in Covington, Ky., "Dean of the Faculty of the Ohio College of Obstetrics, Medicine and Midwifery, Cincinnati, Ohio." The so-called "College" never had a local habitation or existence—a name only, under which to issue diplomas.

After leaving Illinois, HEIL was "graduated" upon one term of lectures by the

Eclectic Medical College of Indiana, an institution not recognized by the Illinois State Board of Health. He appears in the current *Medical and Surgical Register* of the United States in capital letters as:

"HEIL, CHARLES P., A.M., Ph.D., (Ec.), Ind. Ec. Med. Coll., Indianapolis, Ind., 1883: Late Prof. of Obstetrics in Ind. Ec. Med. Coll.; Surg-Steward in the U.S. Navy and Hospital Steward U.S. Army, Late War; Mem. of National and Ind. State Ec. Med. Ass'n's; Examining Surg., The Brotherhood of Railroad Trainmen; Late Dean of the Ind. Coll. of Med. and Midwifery, Indianapolis, 1896 3d av., New York, N. Y."

"*Vermont Medical College—the Second Medical College of the American Health Society*," Rutland, Vt. This institution has no existence in Rutland, Vt., except on Commencement day, when one GEORGE DUTTON, of Boston, Mass., who comprises the "Dean and Faculty" of the concern, takes his "graduating class" from Boston to Rutland and there holds "graduating exercises" and issues his diplomas.

DUTTON first attempted to organize what he styled the "First American College of the American Health Society," in Boston; but the Massachusetts Act of 1883, forbidding corporations created under the general incorporation laws from conferring degrees in medicine, secured through the exposure by the Illinois State Board of Health of certain bogus "diploma mills" in Boston, frustrated this attempt. He then incorporated this "Second Medical College" at Rutland, in 1883, under a Vermont act authorizing the creation of corporations to establish and maintain literary and scientific institutions.

Although his "diplomas" are issued in Vermont they do not entitle their possessors to practice in that State, the Supreme Court having decided, in the case of one of DUTTON's "graduates" against the State Board of Censors, that such institutions are not empowered to confer degrees or issue diplomas. DUTTON gives "instruction" in Boston, and has issued some forty-five or fifty Vermont "diplomas" on which persons are practicing medicine in States which recognize "diplomas or licenses from legally chartered medical institutions."

Fogg—Come, Figg, have a smoke.

Figg—I'll die first.

Fogg—Oh, well, every man to his liking. I'll do my smoking before I die.—*Boston Transcript*.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE VIRGINIA MEDICAL MONTHLY
for April. Dr. J. W. Long contributes a
paper on

Hysterectomy for Fibrous Tumor, Complicated with Pregnancy.

reporting a successful case. After reviewing the dangers of pregnancy in a uterus which is the site of a fibroid tumor, the author presents the following propositions:

1. Never fail to advise a woman, the subject of a fibroid, of the dangers of pregnancy.
2. Cervical fibroids, whether submucous or interstitial, should always be enucleated if within reach.
3. Subserous fibroids that have small pedicles may be let alone—trusting that they will be pushed aside, and will not take on such rapid growth.
4. Small or medium-sized tumors, that show no special disposition to rapid growth, may be let alone.
5. Large tumors, especially when multiple or interstitial, demand operative interference.
6. Abortion or induced labor are hardly justifiable.
7. Cesarean section is rarely indicated because of the high mortality.
8. Myomectomy may be practiced in some instances, when there is only one large tumor, and it is situated on the fundus and does not have too broad an attachment to the uterus.
9. When the tumor has a broad attachment, or is situated near the tubes, supravaginal hysterectomy is indicated.

In the instance reported by the author, the woman, a negress, was about three months pregnant. At the operation the ovarian and uterine arteries were ligated and cut, and without any pedicle ligature the tumor was cut away at the internal os. The pedicle was trimmed, the canal cauterized with carbolic acid, superimposed plains of silk sutures applied, and the stump dropped. The peritoneum was carefully sutured on either side, the pelvic cavity made thoroughly dry with sponges, and the abdominal wound closed without drainage. The patient recovered without the slightest drawback. The author states that unless some one else can produce a case ante-dating his (December 26, 1893), he may claim to be the first surgeon in the South who deliberately did a hysterectomy for fibrous tumor complicated with pregnancy. And, possibly, the first one in America to suture and drop the pedicle.

In this issue appear two papers on puerperal eclampsia. The first is from the pen of Dr. W. P. C. Hazen, entitled

Observations on Puerperal Eclampsia

with the history of a case. After reviewing the opinions of the various authorities as to the causation, he comes to the conclusion that it is caused by uremia produced; first, by the pressure of the gravid uterus on the abdominal aorta, its primary branches and

the inferior vena cava; second, obstruction to the outflow of urine; and third, the additional burden imposed upon the kidneys, through their excretion of urea, from the fetus.

In regard to the treatment he states that it is his opinion that in all obstetrical cases in which the physician is consulted, be it early or late in the period of pregnancy, if his slightest suspicion is aroused in regard to the action of the kidneys, he should lose no time in examining the urine. Should we discover albumin, prophylactic treatment is our first thought.

In this line, the very best effects have resulted from the enforcement of a strict milk diet. In those cases in which it is impossible, the diet should, at least, be restricted; in short, the same dietetic treatment is indicated as in true Bright's disease. The physician should see to it that no pressure results from the clothing, and in all cases corsets should be thrown aside. Where it is practicable, in cases of primiparae, the medical adviser should explain to the husband the ill effects of excessive venery. As to medicinal treatment for prophylaxis, diuretics and saline cathartics hold the first place. Simple bi-tartrate of potash, or a mixture of the bi-tartrate of potash, and infusion of digitalis, make the most valuable diuretics that he knows of for these cases. The tincture of the chloride of iron should be kept up continuously and in generous doses. During the period of prophylactic treatment, special attention should be given to the stomach, and attacks of indigestion should be promptly dealt with.

If nervous symptoms develop, active measures should at once be resorted to. To relieve the severe cerebral symptoms which precede convulsions, and to ward off the convulsions, venesection is undoubtedly the surest and quickest means. He has also used, with good results, elaterium, croton oil and pilocarpine. Hypodermic injections of morphine, in conjunction with any of the above remedies, afford good results.

In regard to the premature emptying of the uterus, he thinks that in certain cases it is undoubtedly justifiable; but his own practice in this respect is the conservative one, of letting nature take her course. Labor is generally precipitated by the convulsions; the uterus emptying itself spontaneously.

The second paper on the subject is by Dr. Ralph Davis, "Twenty Years' Experience with Tincture of Veratrum Viride in the Treatment of Puerperal Convulsions." The author administers the drug in doses of twenty-five to thirty drops hypodermically, and claims that it will control puerperal convulsions, when administered in large doses, and that it is perfectly safe to administer it in sufficient quantities to control any case of convulsions. His experience with it has convinced him that it is both safe and efficient. He has used tincture of veratrum viride in

the treatment of every form of conclusion, except traumatic tetanic convulsions.

Dr. Johnson Elliot contributes a paper on
Foreign Bodies in the Upper Air-Passages.

Under ordinary circumstance, he says, foreign bodies in the upper air-passages are arrested in well-recognized localities, among which are the pyriform sinus or fossa, situated laterally to the larynx and the sulcus between the tongue and epiglottis. Usually no trouble is encountered, but an epiglottis which lies close to the tongue or has a wide rolling crest, may have to be forced back before a clear view is obtained.

When lodged in the larynx, the body is easy of recognition by reflected light—arresting spasm by chloroform; a solution of cocaine hydrochlorate is also useful. In some cases, a view is obtained of the trachea to its bifurcation, and in one of his cases a considerable portion of the right bronchus was seen. The recesses about the palatine folds, the post-nasal fossa, and the tonsils, also afford places of lodgment of foreign bodies, but here, with manipulation, they are easily seen.

There is scarcely a point in the throat or nose which cannot be viewed, and any adventitious substance removed.

The author does not look with favor on the practice of swallowing large quantities of bread, potatoes and substances forming a large bolus, as he believes by so doing the point of the pin or bone swallowed is likely to be forced deeper into the tissues.

Dr. A. R. Shands discusses

Tubercular Osteitis of the Hip-joint,

presenting an analysis of 158 cases illustrating its three stages. Hip-disease, especially in children, follows a distinct type, which is to-day classed as a degenerative tubercular osteitis. It presents itself in whatever joint it appears in much the same form, affecting the spongy tissue of the epiphyses, most often near the line of junction with the shaft. It may begin as a single or multiple focus of tubercular degeneration. Later in the history of the affection, the nodule breaks down into pus; generally, the original focus is surrounded by smaller tubercles, which aid in its extension, but the chief mischief is done by the rarefying osteitis. At this stage of the diseased process the focus may be absorbed, and so cured; it may extend to the periphery of the bone and break through and empty itself there; or it may extend into the joint, by far most common, and infect that. When the diseased focus is not absorbed, the most favorable course is for it to break through the periosteum and discharge into the periarticular structures.

In regard to prognosis, he states that the large majority of cases tend, under favorable circumstances, to recovery with more or less deformity; hence it becomes the surgeon's duty to see that the chances of recovery are as favorable as possible, to use the best means of preventing the deformity, and, at the same time to get the most useful limb.

As to treatment, the indications are to furnish fixation, extension and protection; to benefit the patient's health in every

possible way; to prevent and correct deformity, and to meet such complications as may arise. For the purpose of fixation, the writer prefers the plaster-of-Paris spica to anything that he has ever seen used. In applying it two assistants are necessary to keep up gentle traction on the diseased limb while the dressing and plaster bandages are being applied, which should extend from the lower border of the axilla to the tips of the toes; traction should be kept up until the plaster is well set. If the dressings and plaster are snugly applied around the processes of the ilium, the condyles of the femur and the malleoli and foot, no motion is possible at any of the joints of the encased limb. The spica should be reinforced by pieces of light steel extending from the free ribs to middle third of femur. If there is more deformity than can be overcome by gentle traction at first sitting, put the limb up in line of deformity after being partially corrected. Within a short time the muscular spasm will be sufficiently overcome to allow the limb to be brought into proper position, when a second spica can be applied. The complete immobilization thus secured will in large majority of cases overcome in two or three months the muscular spasm, sufficiently to admit of the application of the long traction splint. The walking brace should not be applied until the muscular spasm has been sufficiently overcome to reduce the deformity, so that when the patient walks the traction exerted on the leg by the brace shall be in the line of deformity. It should be continued just as long as there is any spasm remaining and until all signs of disease have disappeared.

In regard to the treatment of abscess, the author advises to let it alone if it is not causing constitutional disturbance. If the abscess is increasing rapidly and there is danger of its burrowing into the tissues, aspirate it, then strap it with basket strapping and a roller bandage over it. In regard to excision, he regards it as only justified as a *dernier resort* in the early stage and only when there is reason to think that there is more extensive osteitis than nature can relieve itself of without risk of a fatal complication arising during a long-continued suppuration that will necessarily follow. The author urges the importance of making an early diagnosis; of improving the patient's health in every possible way; of protecting the joint by mechanical means just as soon as spasm is recognized and continuing it just as long as any spasm remains; then he believes very few abscesses will result and rarely ever will there be any necessity for an excision.

Dr. James D. Morgan presents some "Remarks on Typhoid Fever." He believes that calomel, judiciously managed in the prodrome and the first days of the stage of pyrexia, has a salutary effect in shortening the duration of the disease. He has seen good effects from *vystrum viride* when cold sponging had little quieting effect.

Dr. Joseph Jones presents a

Contribution to the Natural History and Treatment of Diphtheria

in the United States, and more especially in

New Orleans, Louisiana. He closes his paper with the following report of the committee of the American Medical Association, made twenty-eight years ago, which he sees no reason to differ from even now.

1. That diphtheria has occurred as an epidemic from time to time from the first settlement of this country.

2. That it is a distinct disease, on no account to be confounded with scarlatina or croup.

3. That it is particularly a disease of childhood, although it exempts no age.

4. That it is communicable to that degree that it is the duty of every physician to separate the infected from those that are well, particularly in children.

5. That it is a disease primarily affecting the blood; consequently the treatment to be effective must be local and general, and of such a nature as to eradicate or neutralize the poison; such local treatment should, however, be used as will prevent the absorption of the fluid portions of the exudation.

6. When the exudation has invaded the trachea, the only hope of saving the patient is tracheotomy.

Dr. John F. Moran discusses the "Antagonism of Erysipelas in Disease." The antagonism is due, in his opinion, to the antitoxine secreted by the bacteria.

The remaining papers in this issue are: "Need of Care in the Diagnosis of Spitting Blood," by James D. Morgan, M. D., and a clinical report of a case of "Induction of Premature Labor in Contracted Pelvis," by E. S. McKean, M. D.

THE SANITARIAN

for April contains an article by Dr. A. Walter Sinter, on

State Sanitation.

particularly in regard to diphtheria and its diagnosis. The author writes of the Klebs-Loeffler bacillus, and the fact that no case can be declared true diphtheria if this bacillus has not been found in the secretions from the lesions. The physician usually cannot promptly examine, bacteriologically, the membrane found in the throat of a patient, and as it is of great importance to the community that this should be done by some one, the various boards of health should arrange laboratories to have all cultures submitted to them by physicians, examined at once, and should notify physicians to make, and promptly submit these cultures.

In New York the system has been put in practice, and the only obstacle now is the very small appropriation given the Board of Health to carry out its work.

In the same number an article from *Engineering* refers to "Dangerous Occupations," and those involving the handling of carbonate of lead particularly.

Means for rendering these less dangerous to the workman are pointed out, and also the fact that as it would involve some extra trouble, and even a little discomfort for the workers, they stand opposed to measures intended solely for their benefit, and the workers

prevent the improvements more than the employers, who would feel the changes suggested very decidedly in the greater expenditures made necessary.

Dr. William Paul Gerhard writes about the Modern Rain-Bath.

The article refers to the shower-bath, compared to the tub-bath, in schools, factories, barracks, etc.

Where many persons are to use the same apparatus it is important that it shall work rapidly, effectively, take up as little room as possible, and consume as small a quantity of warm water as possible.

These objects seem to be gained by the use of the inclined shower, in preference to the ordinary tub. Figures are given to show the relative amounts of water, etc., required, and the author claims that the bath has the additional advantage of toning the system instead of leaving the bather in a languid condition, as a warm tub-bath usually does.

THE BRITISH JOURNAL OF DERMATOLOGY for March. Dr. Stephen Mackenzie writes about

Urticaria.

which he believes to be due to some irritation of the nervous plexuses supplying the skin caused either by some poison absorbed, as in the case of ruptured hydatid cysts, or by some poisonous food, as mussels. Or it may be reflex as seen in some cases of gastritis.

Several cases are detailed showing the different appearances urticaria may present in different persons.—Urticaria hemorrhagica, presenting large patches resembling bruises, and a dark band encircling the abdomen, while at the same time wheals were to be seen on the extremities—this case, the author thinks, a manifestation of hemorrhagic diathesis, and not a distinct form of urticaria. Another case was mentioned where a patient had suffered, in spite of treatment, from urticaria of ten or twelve years standing. In a case of urticaria pigmentosa, patches of buff colored skin were found over various parts of the body, and these became so irritable, on exposure to the air, that the patient began rubbing and scratching, causing the appearance of wheals, papules, etc.

Giant urticaria is another division, and under this head is mentioned a case where the eruption was so great, and also occupied so much space, that a diagnosis of erysipelas was made—the slight constitutional affection, and the short time it lasted, and the presence of more characteristic spots elsewhere, made the diagnosis plain.

The opinion of Sir Andrew Clark, that asthma is really due to urticarial swelling, and not to spasm of the bronchioles, is mentioned.

The author's favorite treatment seems to be antipyrin, in twenty or thirty grain dose at bed time, and the external use of a solution of glyceride of lead (in water one part to 20) salicylic and carbolic acid ointments are also mentioned, and among internal remedies; salicylates, colchicum, bromide of potash, and

pilocarpin. Although having had some success with pilocarpin, the author also advocates atropine in doses of 1-120 to 1-100 grain.

Dr. Henry Handford describes a case of

Dermatitis Exfoliativa Pigmentosa.

The patient was a gray-haired man of 55 years, formerly with light complexion, but now of almost the color of a Hindoo, or mulatto, without having any symptoms of Addison's disease. The only complaint is of itching and irritation of the skin; which is found on examination rough, scaly and somewhat indurated.

One day in summer, thirteen years ago, he scratched his leg, while mowing and very much heated, and it became inflamed and remained so ever since, at intervals. The inflammation spread to the other leg, and when working and perspiring large blisters would form on the buttocks, dry, and peel off. In 1898, during hot weather, the eruption spread to arms, face, and trunk, and the pigmentation began, the groins and axillae becoming darker than the trunk.

Shortly before admission to the hospital, he says, a large double handful of scales could be daily collected from his bed, but during his stay this was much less.

The condition resembled argyria, somewhat, but there was no history of the use of silver salts; the mucous membranes were not affected, and the coloration has diminished of late. Arsenical coloration is not usually so intense or universal, but the author says the

color was similar in a case which he has described. The quantity of arsenic taken by this patient is thought to have been small (liquor arsenicalis in five minim doses from September 2d to October 20th.)

The treatment the author used was quinine, warm baths, and a solution of gelatine painted on the affected parts and covered by gauze bandages. Under this the skin became softer and moist, desquamation ceased but the pigmentation was unaltered.

Dr. John T. Bowen describes an

Epidemic of Alopecia Areata.

which he had an opportunity of seeing and which has been previously mentioned elsewhere.

The epidemic occurred in an institution, and of sixty-nine children, inmates, sixty-three developed the disease. Microscopic examination of hairs from the margins of the patches was made in numbers of cases; but nothing could be found to indicate tinea, no broken hairs, no scales, etc., no parasitic growth. Bits of skin could not be obtained. The only peculiarity found in this group of cases was that many had a large number of lesions so small that it was difficult to determine that any existed. Four girls of fifteen and over, and all the matrons and adults, escaped. The cases improved, but different varieties of treatment seemed about equally beneficial, and the child first affected, although not more severely attacked, appeared to be the last to get well.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A. M., M. D.

MEDICINE

Treatment of Chronic Heart Valve Disease.

Dr. James Tyson (*Amer. Jour. Med. Sci.*) points that relief is often obtained from the occasional use of pergatives—five to ten grains of blue mass, followed by a saline, or the continuous use of small doses—one-half to one grain thrice daily. The greater apparent effect of the infusion of digitalis is due to its use in larger dose, although it is likely to be better borne by the stomach. Strophanthus, better borne by the stomach, has been used in doses of ten minims every two hours for forty-eight hours without interruption. Caffein in three-grain doses every three hours, in mitral regurgitation, is admirable, but is likely to produce insomnia. Sparteine in one-quarter, increased to one-half grain dose, three to five times daily, is of value if a diuretic be desired. For irregularity of heart action and palpitation, more common in mitral disease, belladonna is very useful. A belladonna plaster placed over a palpitating heart is a most efficient agent. Nitroglycerin, one-hundredth of a grain, increased to double the quantity, three times daily, often serves to the same end.—*Med. Standard.*

The Treatment of Biliary Calculi.

M. A. F. Plicque (*Gazette des Hopitaux*) gives the treatment of this condition as follows:

1. With regard to the pain it may be regarded as of two forms: (a) Violent attacks of pain. In this form, apply very hot poultices with laudanum in them. Internally, gtt. xx. to xxx. laudanum, ext. opii and belladonna in gr. 1-6, every half hour till relieved. Sometimes inhalations of chloroform have been resorted to. (b) There is another form of pain that recurs from day to day, but is not so violent as the above type. This form is best treated by the use of narcotics, prolonged hot baths, revulsion over the liver by leeches in strong subjects, and a milk diet.

2. The means for the expulsion of the calculi are numerous. Some have tried and vaunted the use of ether; others glycerine; some again have found benefit from salicylate of soda. This is specially useful in angiocholitis. The best agent for the expulsion of these calculi is olive oil. This is usually well borne. When there is much revulsion to its use, the stomach tube should be employed.

3. The treatment in the interval. The best agent still is the olive oil. Alkaline waters are useful. Durande's mixture of essence of tur-

pentine 10 parts, and ether 15 parts, in quantities of 2 to 4 grams daily. Chloroform water relieves the flatulent dyspepsia in these cases. If there is any evidence of angiocholitis, salol ought to be administered. This is the best biliary antiseptic we possess.

4. The hygienic treatment must be kept in mind. Proper exercise is of value in restoring the balance of health.

5. Dietary. This should be plain. Abundance of water is indicated. Light, white wines are the only forms permissible. No heavy or indigestible food should be taken. Fresh fruits and vegetables are proper elements of the diet.

6. Medicines. Alkaline waters, as vichy, etc. Laxatives should be used, but strong purgatives should not be employed.

A New Method of Politzerizing.

Every one who has tried it knows how difficult it is to get the patient whom it is intended to "Poltzerize" to swallow at the proper moment. Under these circumstances, and as this plan of clearing the Eustachian tube is just now very much in vogue, our readers may be glad to know of a novel and vastly more simply way of attaining the object in view. In Politzer's method, as is well known, in order to prevent the air insufflated into the nose from escaping through the pharynx instead of passing into the tympanic cavity, the patient is asked to sound certain vowels or to swallow a mouthful of water, because in uttering certain vowel sounds, and during the act of deglutition, the soft palate is applied to the posterior wall of the pharynx. The naso-pharyngeal cavity, however, is only partially excluded by these means, and that for a very short time. Dr. Roydon therefore suggests that the patient be directed to take a deep inspiration and then to blow out the air through a small aperture between his closed lips. So long as the patient blows the velum palati remains in contact with the posterior wall of the pharynx, and Politzerization can be performed without the slightest difficulty.—*Ex.*

Marriage, Dysmenorrhœa, and Hysteria.

Wythe Cook (*Am. Jour. of Obstet.*) finds from experience that in most cases of dysmenorrhœa and hysteria amongst single women marriage aggravates the disease. Hysteria is by no means cured by marriage, dysmenorrhœa often returns after pregnancy. One patient suffered from very severe dysmenorrhœa. She married, on advice, but the disease was aggravated by coitus. Conception occurred, and she fully believed that pregnancy would cure her, but the menstrual pain returned immediately after weaning. Another patient, subject to dysmenorrhœa, married when 20, and became pregnant when over 23. She bore a healthy child, and then took to the morphine habit. Her husband died a few months after her confinement. The period was suppressed for five years. After she ceased to take morphine it reappeared, at first irregularly, and at length in due season, but in both cases there was severe

pain. She married again, and has remained eighteen months sterile; the dysmenorrhœa continues. A young woman subject to headaches and hysterical manifestations attended with hallucinations and depression got married. The neuroses were not improved by marriage. A robust young lady free from hysteria married, and bore two children within twenty-one months after marriage. Hysterical swoonings occurred during the pregnancies. A patient subject to dysmenorrhœa and hysterical fits married and bore five children. The menstrual pain never reappeared after the first pregnancy, but the fits still occur.

Enteric Fever; Perforation; Peritonitis; Recovery.

Newton (*Chicago Med. Rec.*) has reported the case of a lad, 17 years old, who came under observation on the third day after having taken to his bed, with diarrhœa, tympanites, and pain in the right iliac fossa. The temperature was elevated and rose spots were present upon the abdomen. Restriction of the diet to milk and beef-tea, and the administration of a mineral acid and pepsin, and bismuth, salol, opium, were followed by amelioration in the symptoms. On the seventh day, however, the temperature again rose, the pulse became accelerated, small and thready, the face pinched, the skin cold and clammy, the tongue dry, and the abdomen tympanitic and extremely sensitive. It was learned that during the previous night, while a movement of the bowels were taking place, sharp, acute pain was felt in the side. Perforation of the bowel was diagnosed, and celiotomy advised but not acquiesced in. Morphine, strychnin and whiskey were repeatedly administered, and by the following day the patient had rallied somewhat. He remained in a precarious condition for several days, when he gradually began to gain ground. For the succeeding three weeks the temperature pursued an irregular course and the diarrhœa was particularly obstinate. After the lapse of another week indications of the presence of an abscess between the anus and the scrotum appeared, and three ounces of fetid pus was evacuated. Through the opening made a probe could be introduced into the abdominal cavity for a distance of ten inches. The opening was kept patulous by means of gauze, which was removed after the lapse of twelve days, and the external wound was permitted to heal. From a few days after the occurrence of the supposed perforation complaint was made of a particularly sore spot, about three inches in circumference, below and a little to the left of the umbilicus, and over which percussion yielded a dull note. It is believed that the spot indicated the situation of the local peritonitis that existed, and which remained local from the formation of intestinal adhesions as a result of the exudation of plastic lymph. As peculiar features of the cases are pointed out the early date of the occurrence of perforation, the situation in which the abscess pointed, the failure of the temperature to decline, and the absence of vomiting.

A Certain Sign of Death.

Mons. W. Necati (*La France Medicale*) reports to the Academie des Sciences the results of his experiments with a new instrument he has had constructed for the purpose of testing the ocular tensions. He has found that during life, tension varies from 14 gram. to 25 gram. Within half an hour after death, this tension has fallen from 1 gram. to 3 gram., and in two hours after death has become complete. As soon as the pulse ceases, the ocular tension falls, and steadily declines for two hours. An eye that has been enucleated and replaced in the orbit acts in the same way. By the time the loss of tension is complete, the body must have been dead at least two hours.

SURGERY.

The Principles of the Treatment of Gonorrhoea.

Professor Neisser, the distinguished discoverer of the gonococcus considers that all rational treatment directed towards the cure of gonorrhoea should be based upon the recognition of that micro-organism as the pathogenic principle of the disease. The greatest difficulties encountered in its eradication are that it does not remain localized in the urethra, but spreads to the oord, epididymis, prostate, and bladder in the male; to the uterus, tubes, ovaries, and peritoneum in the female; and that the virus in the later stages is situated deep beneath the epithelial layers, extending thence to the surface or deeper tissues, thus forming a chronic source of infection. It can only be easily reached in the first stages. The aim should be to prevent an invasion of the deep urethra and not to allow the disease to become chronic.

Treatment should be begun as soon as possible. The substances used must be (a) such as will kill gonococci, (b) which increase the inflammation as little as possible, (c) which do not injure the mucous membrane. Such are nitrate of silver 1-4000 to 1-2000; ammon. sulpho-ichthyol., 1-100; weak Rotter's pastilles, free from carbolic acid and mercury, 1 pastil to 250 of water; bichloride of mercury, 1-30,000 to 1-20,000. Pure astringents in the early stage are unsuitable, as they may serve to spread the infection. Cauterizing solutions of great strength, which may cause stricture, are dangerous, as are also most mechanical methods, such as the endoscope, bougies, etc. The best treatment is the early and frequent antiseptic irrigation of the urethra. For practical reasons, viz., the wide spread of the disease, injections with large syringes must generally be used instead of irrigations.

In the female the treatment should consist of thorough mechanical cleaning of the urethra and cervix, also using douches and injections.

The general dietetic, hygienic, and antiphlogistic measures are useful, and should be employed as far as possible. In all cases not very acute the presence of a posterior urethritis should be recognized and treated locally if an examination discloses the presence of

gonococci. The treatment should not be limited in duration, as the aim should be not rapidity, but certainty. In chronic cases it should be determined if the discharge is infectious, and if it is so it should be treated by irrigations or instillations. If it is simple we must be guided by the pathological and anatomical changes in the mucous and submucous membrane as to the line of treatment it is best to employ. For the most part these cases require no treatment at all. When the deeper tissues are affected, sounds, instillations, the endoscope, and massage should be used.

The successful treatment of gonorrhoea in the female is attended with much more difficulty than in the male, and without frequent microscopical examinations judgment as regards the therapeutic result is impossible. Treatment should be begun as soon as possible and followed up most energetically, as the tubes, uterus, ovaries, or peritoneum, once infected, are very difficult to cure, frequently necessitating grave surgical operations.—*International Medical Magazine*.

The Early Diagnosis and Practical Surgery of Cancer.

Herbert Snow, M. D., London, (*Am. Jour. Med. Sciences*). Great stress is laid upon the importance of early diagnosis. Early diagnosis, while difficult, can be greatly aided by remembering that "malignant lesions are especially prone to attack degenerating organs and degenerating people. With the exception of a numerically small congenital group of tumors which I have elsewhere classified under a special term, *blastoma*, and which mostly differ from ordinary cancer in rising spontaneously, malignant new growths are almost entirely confined to women above the age of 34, to men past 40. Further they appear in organs which have fulfilled their purpose and are undergoing devolution, or else intestines whose vitality has become conspicuously impaired."

Every tumor first noticed in the breast at or after the thirty-eighth year epoch is, in the great majority of cases, principally malignant; in the remainder it is certain sooner or later to become associated with malignant features in one form or another. From this sweeping rule, the most sweeping cyst within the gland parenchyma, a dilated acinus or dilated duct is not exempt.

Again it is laid down as an axiom that no average species of malignant tumor in the adult ever appears without an adequate and generally ascertainable cause.

About 11.7 per cent. of cases of cancer of the breast follow sudden injury—a blow or fall; the remainder are consequent upon some agency of a neurotic character impeding the normal devolution of the mamma.

Dr. Snow lays great weight upon "mental distress." He states that he has "known of one or two cases" follow an attack of influenza.

These statements cannot be accepted as in any way proven, although they should be given careful consideration as coming from a

man whose opportunities for observation in this disease have been exceptionally great. The mere fact that a cancer was first noticed shortly after an attack of influenza gives no scientific proof that such attack was an exciting cause rather than a coincidence. The fact that influenza is a disease so widely prevalent still further weakens the argument.

The physical signs of cancer are very well described.

In doubtful cases he believes that too much reliance should not be put upon the microscope, and cites the case of the late Emperor Frederick as a striking example.

Being of the cancer age and "suffering from steadily progressive laryngeal symptoms, the *a priori* probabilities in favor of epithelial cancer were very considerable. Yet in fallacious reliance upon certain microscopic indications of no more than merely negative value, the only measure which afforded a prospect of cure was rejected with quickly fatal result."

"The same historical event further demonstrates what is familiar to the practitioner in cancer, that the microscope for diagnostic purposes is of doubtful use."

Its conclusions may be taken without hesitation for positive purposes, but rarely or never for the negative. They may show that cancer is present, but cannot be trusted to prove its absence.

Treatment is briefly dealt with. Each case should be treated on its own merits. Early and very thorough removal when possible, but severe and protracted operations upon persons already in an exhausted condition from long standing malignant disease are greatly to be deprecated.

Under existing conditions of practice, wherein cancer is seldom brought to the notice of the surgeon in its incipient stages, comparatively few operations should take place, but these should be searching and thorough.

The writer strongly advocates opium, and believes that opium persistently given from the earliest moment at which there is reason to believe the disease incurable by surgical means, not only materially prolongs the individual's life, but also has often a more marked effect in arresting the growth.

Iron, arsenic, quinine tonics in general are useless except as placebos."

Aseptic Surgery for the County Practitioner.

Dr. James B. Bullitt makes the following observations:

1. Coats and cuffs should be removed, a clean apron or towel fastened over the front; hands and arms are scrubbed in hot soap and water; special care is to be given to the nails; the hands are then rinsed in boiled water or alcohol.

2. The field of operation is rendered aseptic by being thoroughly washed with soap and warm water, any hair being shaved. This is followed by alcohol or ether.

3. Sheets, towels, aprons, etc., can be completely sterilized by being scrubbed and then boiled in a five per-cent. solution of washing soda.

4. Ordinary cheese or butter-cloth makes an excellent gauze, and can be sterilized by being placed in a steam sterilizer for an hour. It is then put in a jar that had been boiled and tightly stoppered. Iodoform can be sprinkled over it when needed.

5. The best sponges are cotton-wool tied in butter-cloth and placed for an hour in the steam sterilizer. Sterilized heavy linen make good substitutes for large flat sponges in abdominal operations.

6. Silk for sutures is sterilized by being boiled for fifteen minutes in the soda solution. It is then dried in the sterilizer and placed in sterilized, stoppered bottles, containing a five-per-cent. carbolic acid solution.

7. For flushing out a cavity, nothing is better than boiled water, or a physiological saline solution that has been boiled.—*American Practitioner and News*.

The Surgical Treatment of Pulmonary Cavities.

From a study of the present aspect of the surgery of the lungs, Dandridge (*Annals of Surgery*) concludes that a certain number of pulmonary cavities can be successfully dealt with by incision and drainage. Tuberculous cavities in the lower portion of the lungs, if single and superficial, and if the general condition of the patient permits, should always be opened. Cavities at the apex should only be opened when there is free and persistent fetid expectoration that has resisted treatment, and the remainder of the lung is not involved. Abscess, gangrene, and hydatid cyst should be opened and drained whenever they can be located. Closure of the pleura should be insured before the evacuation of a cavity is attempted. In case of pyo-pneumothorax the fistulous track should be explored, and any cavity freely laid open by means of the cautery. Cavities that have been opened are best treated by packing with gauze, preferably impregnated with iodoform. The further careful trial of such agents as iodoform, chlorin-gas, and zinc chlorid is desirable to determine whether or not the tuberculous infiltration may be modified by them. It is also desirable, for the further extension of surgical interference in pulmonary cavities, that the means of locating such cavities and of determining their size and the exact character of the tissue that overlies them should be perfected by further study, and for the accomplishment of this the surgeon must look to the physician.

The Early Treatment of Carcinoma Uteri.

Kelly contributes a valuable summary of this subject to the *New York Medical Journal*.

The large number of cancer cases constantly applying to Kelly for relief have induced him for the past three years to adopt certain

stringent rules with regard to his own patients, which he has taught for the same period in his lectures at the Johns Hopkins Hospital.

The end in view is two-fold. First, by treating cervix liable to become cancerous, and thus prevent the formation of this neoplasia; and secondly to detect cancer of the cervix at a sufficiently early date to successfully eradicate the disease.

1. It is the duty of the obstetrician to see each patient at his office from two to three months after her confinement, and there to examine and make a careful record of the condition of the pelvic structures, stating accurately what lesions have been produced by the confinement.

2. Cervical lacerations should be carefully described, noting the position and depth of the tear and the appearance of the lips. Lacerations require no treatment when the lips are thin, uninfiltrated, and lie together. Thick, infiltrated, and everted lips associated with cervical catarrh call for depletory treatment, followed by repair of the laceration.

3. Every woman who has passed thirty-five years of age and has borne a child should have this examination made without delay by a competent physician, and if the cervical lips do not appear perfectly sound she should be kept under observation and examined at intervals at from six to eight months.

4. Every woman over thirty-five, with a cervical tear, should be examined at least once a year for ten years, or longer, if the appearance of the lacerated area is not perfectly healthy.

5. These rules apply with special force to patients whose family history shows a marked inclination to cancerous diseases.

If these rules are conscientiously observed there is not a shadow of doubt but that thousands of lives would be saved yearly in this country alone by timely interference with a disease so markedly local and accessible in its origin.

The author states that he feels that while we are searching for a cure for cancer, the line of progress in the immediate future for the gynecologist is clearly in the direction of prophylaxis and anticipation, either preventing or discovering the malady in its earliest stages.

ARMY AND NAVY.

CHANGES IN THE U. S. ARMY FROM APRIL 15, 1894, to APRIL 21, 1894.

Captain Nathan S. Jarvis, Assistant Surgeon, will be relieved from duty at David's Island, New York, upon the arrival of Captain Samuel G. Robinson, Assistant Surgeon, and will report in person to the Commanding Officer, Willett's Point, New York, for duty, relieving Captain William P. Kendall, Assistant Surgeon. Captain Kendall, upon being so relieved, will report in person for duty at Fort Columbus, New York.

PROMOTION.

Captain James C. Merrill, Assistant Surgeon, to be Surgeon with the rank of Major,

March 13, 1894, vice Bartholf, retired from active service.

First Lieutenant Allen M. Smith, Assistant Surgeon, will be relieved from duty at Fort Custer, Montana, at the expiration of his present leave of absence, and will report in person to the Commanding Officer, Fort Reno, Oklahoma Territory, for duty at that post. First Lieutenant James M. Kennedy, Assistant Surgeon, is relieved from duty at Fort Riley, Kansas, and ordered to Fort Custer, Montana, for duty.

By direction of the President, Captain Alonza R. Chapin, Assistant Surgeon, will report in person to the President of the Army Retiring Board at Fort Bliss, Texas, for examination by the Board.

The leave of absence granted Captain Ogden Rafferty, Assistant Surgeon, is extended eighteen days.

First Lieutenant Charles Willcox, Assistant Surgeon, is relieved from temporary duty at Angel Island, California, and will rejoin his proper station, the Presidio of San Francisco, California.

U. S. MARINE HOSPITAL SERVICE FOR THE FIVE WEEKS ENDING APRIL 21, 1894.

Murray, R. D., Surgeon, to inspect Quarantine Stations of Florida, April 17, 1894.

Ballhache, P. H., Surgeon, to proceed to New London, Conn., as Inspector, April 18, 1894.

Mead, F. W., Surgeon, to report to Chairman Committee on District of Columbia, U. S. Senate, for special duty, April 7, 1894.

Carmichael, D. A., P. A. Surgeon, to report to Medical Officer in Command at San Francisco, Cal., for temporary duty, April 11, 1894, to proceed to Port Townsend, Washington, and inspect M. H. S., and Quarantine Service, April 21, 1894.

Brooks, S. D., P. A. Surgeon, to proceed to Chicago, Ill., for temporary duty, April 3, 1894.

Bratton, W. D., P. A. Surgeon, to report at Bureau, April 16, 1894, to proceed to Riedy Island, Quarantine, and await orders, April 20, 1894.

Vaughan, G. T., P. A. Surgeon, detailed as Chairman Board for Physical Examination of Candidates, Rev. Marine Service, March 19, 1894.

Cobb, J. O., P. A. Surgeon, to proceed to Seattle and Tacoma, Washington, as Inspector, April 12, 1894.

Wertebaker, C. P., P. A. Surgeon, granted leave of absence for two months, April 3, 1894.

Brown, B. W., Assistant Surgeon, granted leave of absence for six days, April 7, 1894.

Decken, U. E., Assistant Surgeon, placed on "Waiting Orders," April 1, 1894.

Strayer, Edgar, Assistant Surgeon, to proceed to Vineyard Haven, Mass., for temporary duty, April 4, 1894.

Oakley, J. H., Assistant Surgeon, to proceed, to San Francisco, Quarantine Station for temporary duty, April 11, 1894.

Prochazka, Emil, Assistant Surgeon, to proceed to Cleveland, Ohio, for temporary duty, April 2, 1894.